CALIFORNIA
OIL WORLD

PUBLISHED TWICE A MONTH
FOR TIMELY, COMPLETE
CALIFORNIA OIL NEWS COVERAGE

• SECOND ISSUE
AUGUST, 1945
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WHOLE NO. 1686

PETROLEUM PUBLISHERS, INC.
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W. C. MONROE—President and Editor

117 WEST 9TH STREET
LOS ANGELES 15, CALIFORNIA
KINZIE MILLER—Vice President

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August 30th, 1945
Telephone Number TUcker 2571

Carrington Kung

The tremendous impact of the war's end on the petroleum industry already is making itself felt, but months—if not years—will be necessary before oil men can take an accounting of their gains and losses in one of the greatest contributions to the victorious conclusion of the world's most terrible holcaust.

Events of the post few weeks—the Potsdam conference, the announcement of the atomic bomb, Russia's declaration of war against Japan, and the dramatic finale in which Japan was forced to her knees—transpired so suddenly that industry, Government and the general public were caught unawares.

Washington, at the moment, is trying to orientate itself to a situation in which Government agencies are vanishing like the morning mist; strict Federal controls are being jettisoned overnight, and the problems of contract cancellations and reconversion of huge and costly Government-owned plants are bedeviling the industries of the country.

Of major importance to the petroleum industry—from the Washington point of view—is the self-planned "liquidation" of the Petroleum Administration for War. This agency will bow out, maybe within the month, after more than four years of gruelling work synchronizing the petroleum industry with the overwhelming demands of the United Nations for oil with which to win a world war.

The Petroleum Industry War Council, patriotic group of industry representatives which staunchly supported PAW in the herculean task of oiling the war, presumably will remain at its Washington headquarters for a few months to advise on postwar problems facing the industry.

Since PAW is left with virtually no legal basis for continuing its controls, the lid already is off. Control of California production probably will last a short while, under Directive 19, and oil price controls will continue under the Office of Price Administration until the law of supply and demand asserts itself to hold prices down.—But here is what Deputy Petroleum Administrator Ralph K. Davies had to say on the subject of relaxing restrictions:

"All quantity and quality restrictions upon civilian consumption of petroleum products have been terminated. Such controls as remain for the time being will not be such as to interfere in any way with the petroleum industry's serving the civilian consumer.

"We will move promptly, but in a manner calculated to accomplish a smooth and efficient transition. In the case of the oil industry, there is no reconversion required in the usual sense of the word.

"Various production, refining and distribution adjustments must be made now that unit operation of the industry ceases to be necessary. But, in general, the same kinds of products are being produced today as are required in peacetime; the change lies principally in the direction of contraction and rearrangement.

"The oil industry enters the peace period in healthy condition and excellently equipped to assume overnight its peacetime role."

A sharp cut in crude allocations probably will be ordered before CALIFORNIA OIL WORLD goes to press. This is estimated at 300,000 B/D for the nation. Transportation subsidies are on the verge of being ended, including that covering the rail movement of from 30,000 to 40,000 B/D of West Texas crude to California refineries.

These events put the oil industry more or less back on its own, after four years of Federal control. It would be impossible to guess how California will make out, since this State is not a member of the Interstate Oil Compact and has never approved a State conservation act. Withdrawals from California fields have been particularly heavy, with much overproduction to fill the heavy demands of the war with Japan.

Some oil men regret that Federal control has ended so suddenly, believing a "tapering-off" process would have been preferable, but the end of the war left PAW with no other choice than to throw overboard most of its restrictions.

However, the shock of transition—both for California and the rest of the nation—has been cushioned to a large extent by the fact that quantities of oil still are needed to fuel ships bringing troops and equip-

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ment back from Europe and the Pacific; to supply the occupying forces in the conquered enemy countries with oil; to power ships bearing food and supplies to the exhausted liberated countries and to fuel the U. S. fleet, which still prowls Pacific and other ocean areas.

In California, the opportunity to govern production by voluntary agreement will present itself, but only the most optimistic believe such a program can succeed after conditions return to normal. Whether the industry can take stock of its overproduced condition and follow a sane development program is questionable. More likely is a repetition of the situation which caused the Statewide controversy over the Atkinson bill in the late '30's,—whenever prices drop or some similar crisis arises within the industry. . . . In the immediate future the State can afford to put considerable oil in storage, as crude stocks are at a minimum working level.

Concerning postwar disposal of Government-owned refineries, pipelines, tankers and other oil industry equipment, the O'Mahoney petroleum committee is planning on hearings late next month, or early in October, to wrestle with these knotty problems. The hearing should be full of fireworks, as they will not be confined to the oil industry but will include witnesses from the C.I.O., the gas and coal industries and the railroads.

Meanwhile, all contracts with privately-owned 100-octane plants have been cancelled out, excepting those with 30-day clauses. In the case of 100-octane plants owned by Defense Plant Corp., the Reconstruction Finance Corp. and PAW are sitting up nights trying to work out ways of permitting the plants to continue in operation while harassed operators make up their minds whether they want to buy the facilities and put them to use, postwar, or lease or abandon them.

Though pretty much shoved out of the limelight by the many developments of the past few weeks, the question of State vs. Federal ownership of the tidelands is still a very hot issue.

United States Attorney General Tom C. Clark received a call, in late July, from State Atty. Gen. J. Tom Watson, of Florida, and Solicitor Fowler V. Harper of the Department of the Interior. Endorsed by Secretary of the Interior Ickes, the recommendation was made by Watson that the Justice Department file suit in the U. S. Supreme Court against the State of Florida to determine what rights, if any, the Federal Government may have to the tidelands heretofore recognized as the property of the State.

Some surprise was expressed, when it was first learned Watson had been prevailed upon by Interior to recommend the suit against the State he represents. It has since been learned he earlier attempted to restrain a State improvement board in Florida from "peddling" tidelands properties to interested oil companies,—presumably through the customary practice of leasing the properties through the State.

Watson's recommendation has been "taken under advisement" but no decision has yet been made, Atty. Gen. Clark told CALIFORNIA OIL WORLD. The Florida state official is expected to return to Washington late this month, Clark revealed.

Meanwhile, it is understood Ickes not only is anxious to put through the suit against Florida but is urging the Justice Department to bring a similar action against California.

Regarding the pending tidelands legislation, which would nullify forever the Government's efforts to gain title to the lands, it probably will meet with opposition when the measure comes up before Congress. Sen. Pat McCarran (D., Nev.) chairman of the Senate Judiciary Committee, told this reporter that Sen. Burton K. Wheeler (D., Mont.) has announced he will fight the bill.

McCarran, who heads a special Judiciary subcommittee examining the legislation, expects to start hearings sometime this fall. The tidelands resolution already has been reported out by the House Judiciary Committee and is awaiting the return of Congress and a rule from the House Rules Committee to bring it up for debate on the floor.

The "pipe line dreams" of certain Texas promoters who have been pressing continually for a line extending from West Texas to Southern California, went up in smoke with the end of the war. But not before certain banking groups from Texas maneuvered themselves into an embarrassing and uncomfortable position by attempting to have Deputy Petroleum Administrator Davies "fired" and a Texan installed in his job.

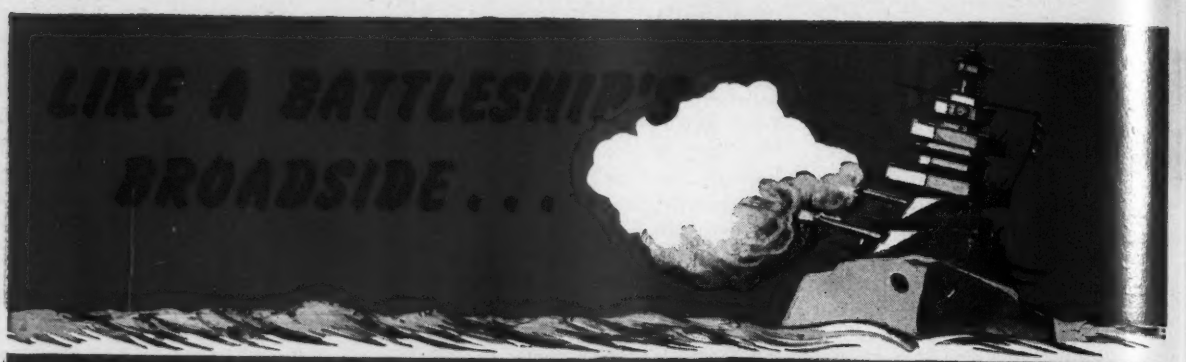
Obviously irked by the cool response Texas has received from PAW on the West Texas-California pipeline and other projects, the Dallas Clearing House Association, comprising some of the biggest banking concerns in the State, wired two of Texas' leading representatives in Congress—Sen. Tom Connally, chairman of the Foreign Relations Committee, and Speaker of the House Sam Rayburn—demanding Davies' scalp.

The bankers' wire — supported whole-heartedly by the Oil Workers International Union, C.I.O.— boomeranged immediately. Not only did the frolicsome press take pains to point out that Texas has been substantially represented in key jobs with PAW, but Texas oil men dispatched telegrams to Davies "deploring" the action of the Dallas group and praising the Californian for the "magnificent contribution" he has made as deputy administrator.

Davies himself got a hearty laugh out of the tempest in a teapot stirred up by the bankers. So tickled was the Standard of Cal. vice-president that he wrote Fred F. Florence, president of the Clearing House Association, a letter of appreciation stating he "would be uncommonly lacking in gratitude if I did not thank you for eliciting the expressions of confidence which have come to me over the past week from prominent Texas oil men." Davies conceded there was "some slight question in my mind as to whether your sole purpose was to evoke these gracious expressions" but said the "warmth of the responses" from the Texas industry overcame this somewhat minor consideration.

Besides twitting the bankers for provoking the flood of endorsements received from the Texas oil industry, Davies reminded Florence that Robert E. Hardwicke, PAW general counsel, is a Texan; W. Page Keeton, assistant general counsel, is a

(Continued on Page 13)



McCullough

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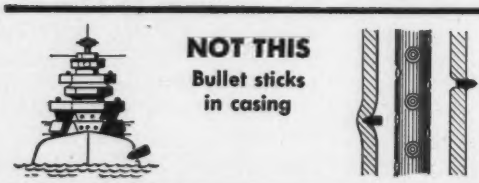

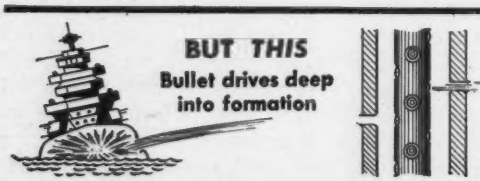

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Refinery Pumps for High Temperature Operation

It has been aptly stated that the pump is the heart of a refinery. Tirelessly moving charging stocks and other liquids to and from critical processing points, its function and efficiency have contributed to the perfecting of highly complex refining procedures. A modern catalytic cracking plant with its gas concentration unit and alkylation or isomerization units involves the use of from 100 to 150 pumps.

History of Hot Oil Pumps

In 1918 the Standard Oil Company of California developed and built the first centrifugal pumps for handling hot oil. Equipment manufacturers then took up the manufacture of such specialized refinery equipment. One concern developed a vertical hot oil pump which was the forerunner of numerous important contributions.

During 1924 the single-stage vertical hot oil pump was multi-staged and further perfected for higher temperatures and pressures. In 1925 the first all steel horizontal hot oil pump was manufactured for the California Petroleum Corporation. From these beginnings have come the present-day units with a capacity of 150 to 2,000 gals/min; a head range of 1200 to 10,000 feet; and the ability to handle efficiently liquids at 1000°F.

Pump Types

There are two broad classifications of pumps in use in refineries, which are determined primarily by the size of the refinery. The throughput in barrels per day has a marked influence in the selection of the pumps. Generally speaking, the larger refineries have both facilities and personnel for coping with the more complicated pumps whereas the smaller refineries get better results with the simpler types.

Refinery hot pumps fall into four general types of application:

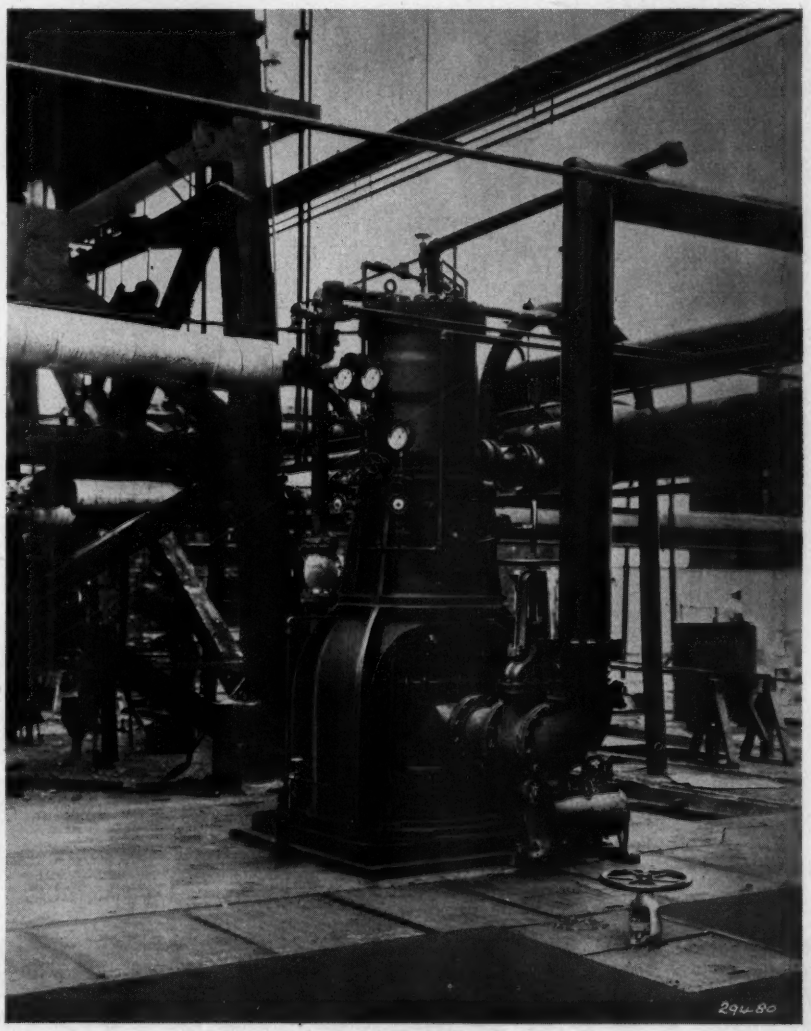
1) Those used in thermal cracking; 2) those used in catalytic cracking; 3) process pumps; and 4) general utility and transfer pumps.

Pumps for Thermal Cracking

In considering centrifugal charge pumps for thermal cracking units it is customary to rate them at 1000 pounds discharge pressure and 700°F. In small refineries, or where the charge rate is 200 gals/min. hot volume (or less), it is customary to use some form of reciprocating pump. Where the charging rate is around 100 gals./min. it is considered economical by many engineers to use a compound steam end, direct-acting outside end packed, forged steel simplex plunger pump with water-cooled plunger and water-cooled stuffing boxes.

In the range between 200 and 400 gals./min. it is a toss-up choice between the reciprocating power pump and the centrifugal pump. But where capacities above 400 gals./min. are considered, the floor space occupied determines the choice — and it is largely limited to multi-stage centrifugals.

Where charging requirements fall between 100 and 200 gals/min, or



This vertical unit was one of the first hot oil pumps installed for refinery use.

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even up to 400 gals/min, it is often considered economical to use some type of duplex power-driven plunger pump, with the liquid cylinder of the same general type as used on the direct-acting pump. In other words, water-cooled forged steel and with a totally enclosed self-oiling power frame.

The choice of power, whether independent steam engine, gas engine, or even motor drive, is a question of preference and of overall economy.

Centrifugal Hot Oil Charge Pumps

The chief distinguishing feature of the centrifugal hot oil pump is that it is contained in a forged steel "barrel." This is because at high pressures and temperatures the flanges of the conventional horizontal split-case pump would be subject to undue stress and temperature changes. In the barrel-type construction, being circular in form, the stresses are more uniform and in this manner the distortion of the casing is prevented.

The barrel-type pump is made in two types. One is the conventional turbine type using diffusing rings. The other is the horizontal split-case pump with a cast iron casing made to fit snugly into the forged steel outer casing. The discharge pressure of the pump surrounds the inner casing and since the pressure is on the outside the flanges of the inner case are under compression and in this way prevent distortion.

Centrifugal hot oil charge pumps can be driven either by turbine or motor. If a motor is used it is customary to have a turbine in tandem with the motor. The turbine governor is set at some lower speed so that in the event of a power failure the turbine will be able to keep the pump rotating at some reduced speed and give the plant operator an opportunity either to shut down the plant or keep it running at the reduced load. In this manner the tubes in the cracking still can be prevented from coking, or the centrifugals from seizing.

Features of Centrifugal Hot Charge High Pressure Pumps

Design features vary with different manufacturers but all are constructed with the utmost consideration of the importance and severity of the service to which they will be put.

One manufacturer utilizes a large diameter shaft with a short bearing span, with a thrust bearing rated far beyond the load placed upon it. An extension type all-metal coupling, forged nozzles keyed and welded into the forged casing, proper stuffing-box cooling, and saddle-mounting are among the design features given special attention.

Where constant operation at a high pressure and high temperature is the basic performance requirement, one manufacturer prepares his pump casing of forged steel, bored with a clearance space between the casing and the diffuser assembly to eliminate metal-to-metal contact and to facilitate removal of the rotor in cases where coke fills this space. All pressure joints are ring joints, which are widely accepted as the proper construction for high pressure service. The pump can be completely dismantled without disturbing the suction or discharge piping connections.

The rotor can be completely assembled outside of the pump barrel and inserted into it as a single piece. The diffuser construction eliminates leakage between the casing and the diffusers; and the internal joints are so constructed that hydraulic pressures act to seal the joint rather than to open it.

The centerline support of the casing allows for temperature changes with minimum distortion or misalignment. The balancing device and labyrinths are readily inspected and are removable without disturbing the main bolting of the pump heads. Efficient multi-pass water cooling of the stuffing boxes eliminates packing troubles.

TABLE I
NICKEL ALLOYS FOR SPECIAL USES IN HOT OIL PUMPS

	Inconel Pct.	Monel Metal Pct.	Monel-K Pct.	Monel-S Pct.	"18-8" Pct.	Ni-Resist Pct.
Nickel	79.5	67.	66.	64.	7.–9.	13–15
Copper	.20	30.	29.	29.	.....	5.5–7.
Iron	6.5	1.4	.9	2.5	.....	Remainder
Silicon	.25	1.25	.25	3.75	.75	.....
Manganese	.25	.25	.4	.5	.60	1.–1.75
Carbon	.08	.2	.15	.1	.08–.20	2.95–3.10
Aluminum	.....	.....	2.75	.....	.....	.....
Sulphur	.....	.....	.005	.....	.030	.....
Chromium	13.	.....	.....	.....	17.–19.	1.5–2.5
Phosphorous	.....	.....	.....	.....	.030	.....

Another manufacturer features a double-case hot oil pump with a capacity range of 150 to 2,000 gals./min. and a head range of 1,200 to 10,000 feet. Liquids at 1000°F can be handled. Construction consists of a simple cylindrical outer case with one circular joint and a longitudinally split inner case. The outer case alone withstands the bursting pressure and is subjected to tension tresses. Radially and axially balanced, the pump is claimed to require no balancing drums, discs or floating seals. The outer case is of nickel cast iron or chrome alloy steel.

Catalytic Cracking Pumps

Catalytic cracking pumps operate at much lower pressures than those used in thermal cracking and usually only two stages are required. While the charging pumps in the cracking unit are comparatively simple, catalytic cracking involves the use of a number of pumps of special design.

It is customary to utilize the hot gases from a catalytic cracking unit to generate steam in a waste heat boiler. This requires a special recirculation pump with the attendant problem of a stuffing box which holds properly at a high pressure and temperature. Other special pumps required are the so-called slurry pumps which involve the usual problems in connection with the handling of any form of slurry, and complicated by the fact that the pump also handles oil. Many of the catalytic cracking plants require small high-pressure duplex plunger pumps of special design to supply the fluid medium for the operation of hydraulic valves.

Features of Centrifugals for Charging Catalytic Units at Medium Pressure and Temperature

Several different types of vertically or horizontally split centrifugal

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"If this company isn't using Gravel Packing to increase production and save repairs, we at least, ought to know why."

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Table II
MATERIALS FOR CENTRIFUGAL PUMPS IN PETROLEUM REFINERIES

Parts	Choice	Salt or Brackish Water	Distillates; Reflux and all Petroleum Products Not over 500°F	Hot Oil Pumps Above 500°F	Cold, Dilute Sulfuric also Caustic	Hot Sulfuric Acid***	HCl	Hydrofluoric Acid Hot or Cold
Impellers	1	Monel; 18-8*	Ni-Resist	18-8 (304)	Ni-Resist	Hastelloy	Hastelloy "B" or equivalent Composition for all parts	Monel
	2	Ni-Resist	S-Monel**	18-8-3 (316)	Monel	"B"		
	3	Bronze	Bronze	(use 316 if	Cast Iron	or similar		Steel
	4	Cast Iron	Cast Iron	Naphthenic Acid Pres.)	Bronze	composition		Cast Iron
Shaft	1	K-Monel	K-Monel	Inconel	K-Monel	Hastelloy "B"		K-Monel
	2	Monel	Monel	18-8 (304)	Monel			
Sleeves	1	Monel	Monel	Use same as shaft	Monel	Hastelloy		Monel
	2	18-8	Monel		Ni-Resist	"B" or		
	3	Bronze	Bronze		Bronze	"D"		
Wear Rings	1	S-Monel	S-Monel	Stellite	S-Monel	Hastelloy "D"		S-Monel
	2	Ni-Resist	Ni-Resist		Ni-Resist			
	3	Bronze	Bronze		Bronze			
Casing	1	Ni-Resist	Ni-Resist	Steel, Lined with 18-8 if possible	Ni-Resist	Hastelloy		Monel
	2	Bronze	Monel		Monel	"B" or		Steel
	3	Cast Iron	Steel or Cast Iron		Bronze	"D"		

* Preferred if water aerated.
** Use where abrasion a problem.
*** Actually the high silicon irons as they are most resistant; their brittleness calls for special design.

pumps in one, two and four stages are made for operating at pressures ranging from a high vacuum to 750 pounds, and from below zero to 800° F. Capacities up to 1800 gals./min. and developed heads up to 900 feet can be supplied.

In one type of pump which is widely used the impellers have a low net positive suction head (NPSH) requirement and good efficiency. These features are desirable when pumping a volatile liquid from a vessel located at a low level. The liquid passages are designed to reduce losses and to guide the flow properly into the impeller eye. Top suction and discharge nozzles are designed to simplify piping, reduce line losses and eliminate the necessity for special venting arrangements. The stainless steel impeller holding screw is out of the flow stream and and not subject to erosion. The impeller hubs are oversize, allowing considerable remachining and permitting the installation of impeller wearing rings at any time.

The casing and head joint is circular and not distorted by temperature or pressure changes. The casing thickness is oversize to provide corrosion allowance with a good factor of safety. Alloy steel bolting, renewable casing wearing rings and renewable stuffing-box throat bushings are standard equipment.

Water-cooled stuffing boxes are built to take eight or nine rings of packing with the seal cage and smothering type gland. Provision is also made for either dead-ending or circulating seal oil. Mechanical seals can be applied where desired.

An accessible stuffing-box water jacket is easily cleaned and insures a sound casting. The water-flushed smothering type gland is connected to the discharge of the stuffing-box water jacket by a flexible hose and needle valve. The bearing housing is cored for the water-cooling of oil and bearings. Water-cooled pedestals for high temperatures are also supplied.

The bearing housing incorporates a positive oil lubricating system to both bearings. The oil level is maintained in the water-cooled oil reservoir by means of a visible constant-level oiler. Two slingers, which are securely fastened to the shaft, pick up the oil and discharge it into troughs which lead to the back of each bearing, insuring a continuous flow of cooled oil through each bearing. Housing seals and a labyrinth type water-slinger keep the oil in and prevent the entrance of foreign materials.

Process Pumps

Process pumps vary widely, due both to the type of service and to the size of the refinery, which determines the quantities to be pumped. In small refineries and for many applications in the larger refineries a direct-acting simplex pump of the so-called minimum-clearance type is used extensively. This pump is especially suitable because the suction pressures encountered are apt to be high, due to vapor pressure of the liquids. The minimum-clearance pumps are built with cylinders suitable for 500 pounds working pressure and with extra deep stuffing boxes provided with special lubrication. This pump has proven exceptionally satisfactory. Made of suitable materials it has also proven useful for handling mixtures of light hydrocarbons and acid

Table III

MATERIALS FOR RECIPROCATING PUMPS IN REFINERY SERVICE

	Choice	Water Salt or Brackish	Distillates Reflux and all Petroleum Products (Not over 500°F)	Hot Oil Above 500°F	Cold Sulfuric & Caustic	Hot Sulfuric Acid	HCL	Hydrofluoric Acid Hot or Cold
Liners	1	Ni-Resist	S-Monel	4-6% Chrome	Ni-Resist	Hastelloy B		Monel
	2	S-Monel	Ni-Resist	Note: These	Monel	or D or		S-Monel
	3	Brass	Bronze	pumps are a special case.	Bronze	equivalent (also body)		
Pistons	1	Ni-Resist	Ni-Resist	4-6% Chrome	Ni-Resist	Hastelloy B		Monel
	2	Monel	Monel		Cast Iron	or equivalent		
	3	Cast Iron						
Rings	1	Monel**	Monel	12-14%	Ni-Resist	Hastelloy B	All parts Hastelloy B or equivalent	Monel**
	2	Ni-Resist	Ni-Resist	Chrome	Monel**			
	3			alloy				
Rods	1	K-Monel*	K-Monel*	18-8 (404)	K-Monel*	Hastelloy B		K-Monel*
	2	Monel		Plungers of	Monel	or equivalent		Monel
	3			High Chrome Alloy				
Valves	1	Durabla Type; Monel or Ni-Resist Seat	Durabla Type; of Monel	18% Chrome 1-2% Carbon	Durabla Type; of Monel	Hastelloy B or equivalent		Monel or S-Monel

* K-Monel rods should be fully hardened.
** Monel rings should be "Spring Temper".

catalysts such as hydrochloric and hydrofluoric acids. In fact, due to the small amount of trouble, this type of pump is used in larger sizes and has also proven economical and useful for the pumping of fresh acids such as hydrochloric and sulfuric. Many refiners are turning to this simple pump in preference to those of more complicated design.

Centrifugal Process Pumps

The centrifugal process pump, when handling light hydro-carbons, presents no special problem excepting the stuffing box. The amount of difficulty experienced depends on the suction pressures and this subject has been thoroughly covered by an article which appeared in the Second March Issue, 1944, of the CALIFORNIA OIL WORLD. Centrifugal pumps are also used to pump mixtures of acids and hydro-carbons, and these units may be large or small depending on the process. In the sulfuric acid contact process the circulation may be as much as 2000 gals/min. Here again the problem is metallurgical rather than hydraulic. The stuffing box also remains a problem. The choice of metals for pumps handling acids or acid mixtures is one of initial cost vs. maintenance, and this in turn depends upon the experience of the industrial refinery.

Pump Controls

The control of the direct-acting steam pump presents a simple problem. The flow of steam to the pump can be controlled by the use of a regulator valve in the steam line; or the pump can be set to operate at a constant pressure and the rate of flow controlled by a regulator in the discharge line.

In the case of centrifugal pumps driven by steam turbines the question of control becomes highly controversial. Like the direct-acting steam pump, the flow can be controlled by a regulator in the steam line to control the speed of the turbine. Other operators prefer to have the turbine governor set to maintain a constant speed and then control the discharge from the pump by the rate-of-flow controller or other type of regulator. Actually, the rate-of-flow controller gives the more accurate rate of flow, but it does not necessarily mean the most economical operation of the pump and turbine. This is only a matter of importance in the larger horsepowers.

Another determining factor should be in terms of what governs the amount of flow. If a liquid level determines the amount of flow, this is a simple problem of regulation, whereas control for volume or pressure usually becomes more complicated. Motor-driven centrifugal pumps can only be controlled by throttling the discharge from the pump. Many of the special processes require small positive displacement pumps such as triplex or chemical proportioning pumps, and the rate of flow from these pumps can be controlled either manually or by the use of a variable-speed drive.

Metallurgy of Hot Oil Pumps

The best metals for use in a given pumping unit—centrifugal or reciprocating—are determined by the properties of the material to be handled and the operating pressure and temperature. This is an individual problem which requires a joint study by the refiner and pump manufacturer.

Prominent among the metals which enable the construction of rugged and corrosion-resistant hot-

oil pumps are the nickel and chromium alloys such as Monel metal, Monel-K, Monel-S, "18-8", Ni-Resist, and Inconel—or their equivalents. Table I summarizes the general composition of these alloys.

At temperatures below 500° F. brasses (copper-lead-tin-zinc) and bronzes (copper-silicon-zinc) also play important roles.

When the temperature is above 500° F. "18-8", Stellite (cobalt-chromium-tungsten), Inconel, and high-chrome alloys are of importance.

Where hot sulphuric acid is handled, nickel alloys such as Hastelloy-B (nickel-molybdenum-iron) or Hastelloy-D (nickel-silicon-copper-aluminum), or equivalent materials, are needed for sustained pump service. One manufacturer suggests the following combination for a reciprocating pump for handling hot acid sludge: liner—cast Monel-S; rings—Monel in spring temper; piston—cast or wrought Monel; rods—full hard Monel-K; and valves of Monel or complex nickel alloys containing molybdenum, chromium and tungsten.

Hot or cold hydrofluoric acid can be handled with Monel, Monel-S, Monel-K, steel and cast iron when these materials are applied to the proper pump parts.

Pump Metal Selection by Plant Corrosion Test

When no previous service information is available to show how a new or unusual corrosion problem may be solved, it is generally necessary to make a corrosion test, under service conditions, of various materials that may be considered. Unless it is based on actual service conditions, a corrosion test is deceptive.

An accurate, practical way to measure the corrosive effect of service conditions on different metals is the method that has been adopted as a standard test by the American Society for Testing Materials. The testing device is called a Spool-Type Specimen Holder, and can be inserted into lines as small as 1½ inches I.D. without seriously impeding the liquid flow. With it, a corrosion test can be made on several different metals at one time under actual conditions. Weighed strips of whatever metals are being considered can be mounted in it.

The test is simple to make. It can be conducted without interfering with production. No apparatus is needed except the specimen holder itself. To make the test, the holder is inserted in the line on either side of the pump, and centered by means of the end spiders.

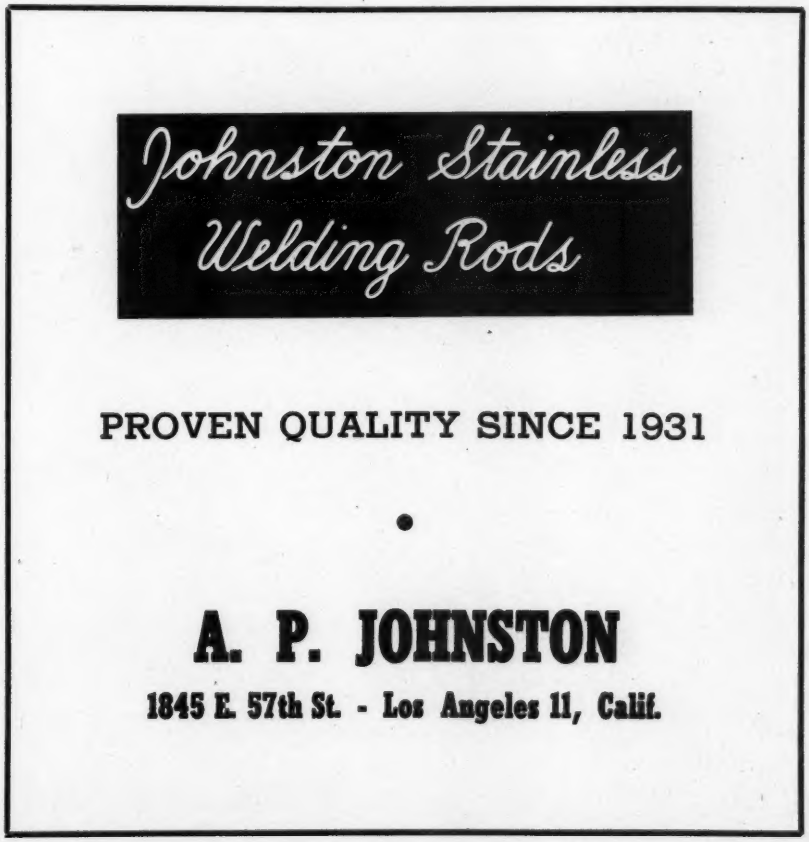
After the holder has been removed at the end of the test period, the rate of corrosion, pitting tendencies concentration-cell corrosion and galvanic action can be determined for each different metal. Detailed information about this test method is contained in the A.S.T.M. paper entitled "Corrosion Testing Methods".

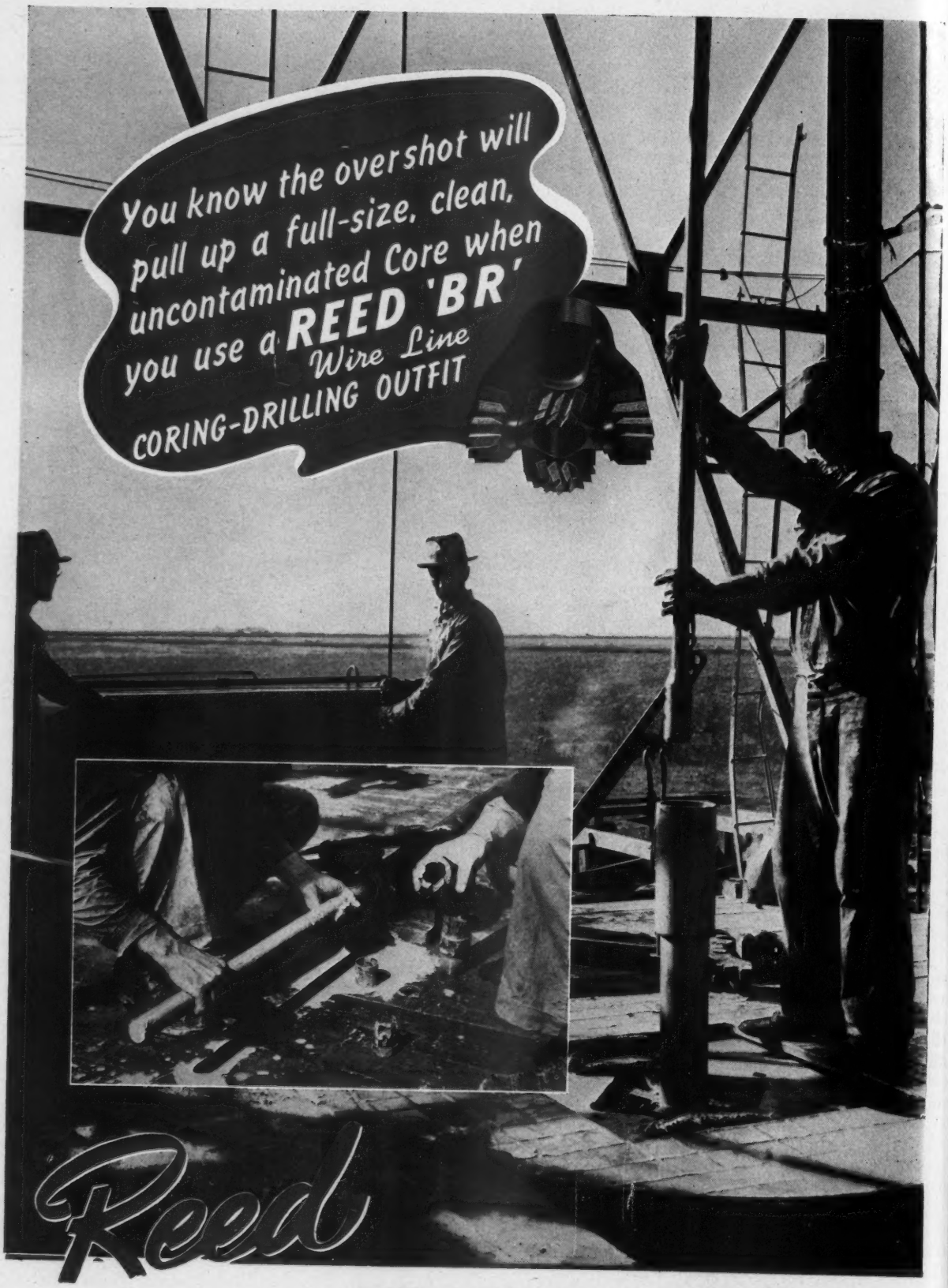
Centrifugal Pumps Operating Above 500° F.

Where the operating temperature is above 500° F. certain basic metallurgical requirements should be carefully considered. One manufacturer suggests, for high-temperature centrifugal operation, that the pump impellers be made of "18-8", or "18-8-3"—and particularly of the latter alloy if naphthenic acid be present. The shaft and sleeves should be of "18-8", or equivalent. Wear rings should be made of a cobalt-chromium-tungsten alloy such as Stellite; and the pump casing should be steel, lined with "18-8". These comments, together with suggestions for materials for centrifugal pump fabrication for other refinery uses are summarized in Table II.

Reciprocating Pumps Operating Above 500° F.

For operation above 500° F. a manufacturer suggests, for reciprocating pump performance, that the liners and pistons be made of a 4%-6% chromium alloy. The rings should be of a 12%-14% chromium alloy, with rods made of "18-8" and the plungers of a high-chromium alloy. Valve metal is suggested as being 18% chromium with 1%-2% carbon. These comments, together with suggestions for materials for reciprocating pump fabrication for other refinery uses, are summarized in Table III.

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ROLLER BIT COMPANY
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Carrington King

(Continued from Page 3)

Texan; three assistant directors of important PAW divisions and a "number of section chiefs and key specialists" also are from the Lone Star State. He named "from memory" more than 25 Texans holding important jobs in his organization, —and further rubbed it in that William R. Boyd, Jr., president of the American Petroleum Institute and chairman of PIWC (also a Texan), on numerous occasions has praised the good feelings between Government and business which have characterized the dealings between PAW and the oil industry.

The Californian praised the "superb record" Texas has made in producing for the war effort and told the banker he "only wished we might have induced more" Texans to join the staff of PAW.

With all the world still marvelling at the greatest scientific discovery of our time — the atomic bomb — thoughts naturally turn to the effect the peacetime development of nuclear energy will have on industries now furnishing the power and fuel which run civilization.

Scientists responsible for the perfection of the U-235 bomb readily admit they have not yet had an opportunity to study means of converting atomic energy to peacetime uses. They are agreed, however, that years will pass before this newest discovery can be harnessed for practical use and see no immediate prospect of the atom replacing oil, coal and hydroelectric power.

From such sketchy details as have been so far released, however, the layman can't help feeling that the oil industry—above all other industries—will be in the best position to take up development of this new science. The huge facilities necessary for production of the atom bomb resemble more closely the intricate installations of a modern refinery; chemistry, engineering and geology brought the discovery into being. The oil industry and the chemical and electrical industries appear to be the best equipped to further actual research on the project, with the oil industry perhaps better geared to the large-scale work involved.

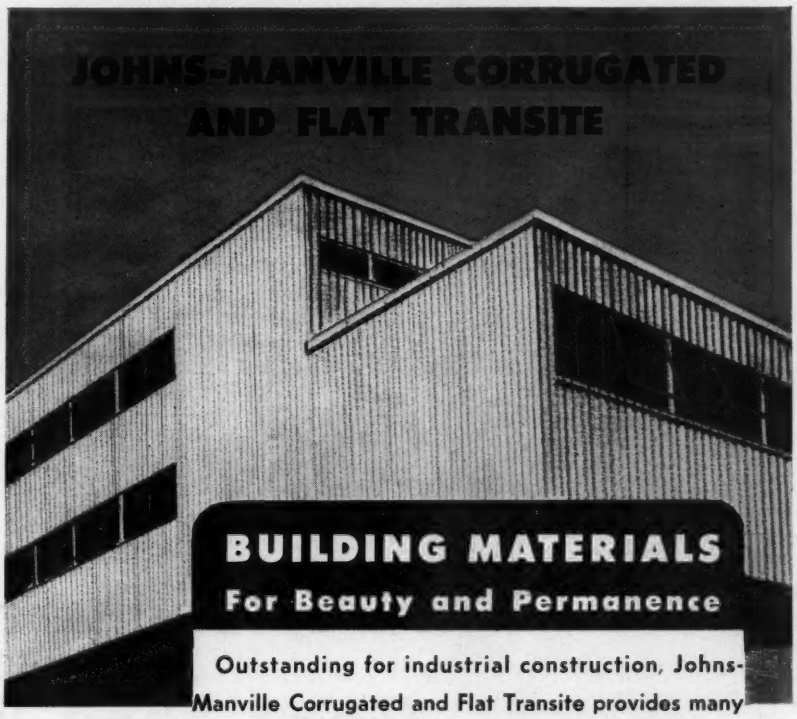
This, however, is just a guess on the part of the writer. Although it is significant that the name of at least one brilliant oil technician was tucked away in the lists of leading physicists, chemists and other scientists appearing in the War Department's first report on the atomic bomb.

Pixley Area "Cat" Quits

Jergins Oil Co. Cal Grape No. 18-17, sec. 17-32s-26e in Tulare county is abandoned in basement at 4634 ft. after entering the material at 4621 ft. A few streaks of oil sand were logged in the interval 4549 to 4595 ft.

Rosecrans Well Works

Patterson-Ballagh Corp. acquired the old Thos. Kelly McMillen No. 4 and is underway with a deepening job from the former depth of 7808 ft.



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Kern County Oil News

By last week's end it still seemed too early to employ first class guesstimates as regards Kern postwar oil prosperity. Everything still depended upon "the ability of free enterprise to make and move goods or render services, and the ability of the public to consume those goods or make use of those services." All factors seemed to qualify well. Nevertheless oil prophets sallied forth and spudded in like wildcats. Best guess was your own. Those in the "knowwhat" kept still for fear of losing their guessing average. So there you have it. However, it is a few days before press bedtime and there are at the present writing a few samples of prediction wisdom which may belong to the "funnies."

One thing was made very clear from a 100 octane standpoint and also that the Elk Hills 'honeymoon' was over . . . although the Exploration courtship still goes on and will continue until something is found. Seventy five per cent of the wells in proven areas 'gurgled' their last.

Dana Hogan who has been painfully ill is now able to be up and around, according to Hugh McCay. All of Dana's friends are certainly mighty glad to hear this.

Dr. L. Hueler from the CCMO (Santa Fe) Lease in Fellows came to Bakersfield the other day and it was the first time we had seen him for years. Doc has always been a friend of the oilman and the oilworker. He is chief surgeon for the Chanslor-Canfield Midway Oil Company at that point and has done a good job keeping oil people healthy. He gets paid for keeping them well and has stayed on the job doing just that.

Speaking of health many of the oil operators big ones and little ones and their respective families know Major Vawter. There isn't an oilman or an oil worker who doesn't, and this column pays him a tribute as a fine pharmacist and a human being if there ever was one. He is warworking at Alta Vista Drug Bakersfield now marking postwar time.

Kern County Oil News is proud of its "scoopage" when it beat the conservation story (issue July COW) in a popular weekly newsmagazine. (Issue July 2).

Encouraging postwar note is the first all one kind of cargo of fresh fruit which was shipped middle of August by Cargo Plane. First reports are that this kind of "pilot plant" operation is a success. Nine tons of grapes left Kern Airport and arrived next day at Eastern markets. Nine two pound baskets were in each carton and they retailed to eager housewives for 96 cents each. THE PLANE USING FOUR ENGINES FILLED UP WITH 100 OCTANE.

Standard Oiler Magazine in last issue featured a meeting at which seven motor transport department employees were presented service pins. Kenneth LeGar 25; James Small, 25; Joseph Todd, 25; Fred Heselwood, 25; John Halverson, 25; and Fred Garing, 25 years service.

Kern County has been honored the most number of times in a ship building and launching campaign. All the oil hills that exist here have been named on the ships, tankers and oilers that go to sea . . . with petroleum cargo. Marinship Corporation has been generous indeed with this program. Recently the Wheeler Hills was launched and the last one planned was the Maricopa Hills. Future program is not known but several more "Hills" have been on the launching program. Among those launched were Elk Hills, Antelope Hills, Buena Vista Hills, Kern Hills, McKittrick Hills and Lost Hills.

Mohawk's 100 octane program has been reported cancelled, but this does not mean that other similar or 'recycling' plants of no small calibre will have any curtailment. Good bet is that Mohawk will reconvert and also still continue to make 100 octane.

To Oilman Dick Hood came as it must come to all oil men the grim "crown block" of death. The oilworld of California and its Kern environs were saddened one Monday morning last month when the news was not good because it had related the passing of Richard A. Hood their long time friend. Dick Hood came up the hard way, made good, and did a lot of good for the industry and his fellowman as well. For more than thirty years he was a local oil broker and had many interests. He is survived by his widow Mrs. Anna Z. Hood, Bakersfield; sons, Robert Hood, U. S. Army; Jack Hood, U. S. Navy; daughter Mrs. Hazel Sheldon, Bakersfield; brother Thomas Hood, Santa Maria; sisters Mrs. Jennie Brown and Mrs. E. O. Reed, Paris, Texas; and one grandchild.

"Ten Years Ago" American Naptha Oil Corporation of Beverly Hills headed by Prince Serge Mdivani as President was slated to sink an exploratory well in old Kern River field . . . according to the files of the "Californian".

"Forty years ago James Rogers local driller suffered a broken back when he fell on the Tavern Lease. Doctors said he would recover."

"Fifty years ago L. P. St. Clair returned from San Francisco and reported that he preferred to live in Bakersfield to the big city."

"Fifty years ago Ralph Blodget suffered from an accidentally fired 22 rifle bullet which entered his arm."

These items were also from the Bakersfield Californian which goes to show that Kern County Oil News was news then and is now. These names continue to make news as these persons make something happen.

Assemblyman Thomas Werdel of Kern County is a member of the interim oil investigating committee appointed in 1943 and serves with six other assemblymen from other oil bearing areas of the state.

Members of the San Joaquin Geological Society were to have met on a certain Tuesday night for a report from Robert T. White, chief geologist for Barnsdall Oil Company on "Stratigraphic Terminology" . . . but rumor has it that Hirohito had a different plan and the last we heard the meeting was postponed

(Continued on Page 35)

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California Oil World's Monthly Summary

DEVELOPMENT—PRODUCTION—SUPPLY & DEMAND
PACIFIC COAST TERRITORY
TABLE I—CALIFORNIA DEVELOPMENT—PRODUCTION

	JUNE, 1945 DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed First 6 Months	Daily Average June 1945	Daily Average June 1944
SAN JOAQUIN VALLEY						
Ant Hill	3	.....	.....	7	531	.....
Antelope Hills	.....	.....	.....	2	1,800	1,694
Antelope Plains	.....	.....	.....	.....	24	.....
Arvin	.....	.....	.....	.....	11	40
Bellevue	.....	.....	.....	.....	587	474
Belridge—North	2	.....	.....	2	6,367	6,547
Belridge—South	2	10	376	78	13,606	11,565
Blackwell's Corner	2	.....	.....	.....	147	53
Brundage	.....	.....	.....	.....	.....	.....
Buena Vista Hills	14	16	6,288	98	53,292	15,153
Burrel	.....	.....	.....	.....	41	20
Canal	.....	.....	.....	.....	3,564	3,500
Canfield-Gosford	.....	.....	.....	.....	112	.....
Canfield Ranch	.....	.....	.....	1	40	39
Coalinga-East	2	6	408	21	21,663	21,447
Coalinga—Nose	1	1	51	1	62,753	69,691
Coalinga—West	.....	.....	.....	15	8,176	7,266
Coles Levee—North	3	1	165	5	15,038	18,549
Coles Levee—South	2	1	107	4	2,701	
Dyer Creek	.....	.....	.....	.....	.....	.....
Edison	2	3	686	21	4,162	2,698
Elk Hills	11	11	2,082	170	62,079	15,274
Fruitvale	.....	1	21	8	8,685	8,402
Greeley	4	3	514	6	15,645	14,313
Helm	1	.....	.....	9	3,382	946
Jacalitos	5	2	227	17	3,306	525
Kern Front	1	3	387	19	12,984	13,712
Kern River	4	3	132	19	10,093	9,702
Kettleman North Dome	7	.....	.....	9	39,073	41,303
Lanare	.....	1	94	2	300	146
Lost Hills	1	1	38	6	3,426	3,361
McClung	.....	.....	.....	.....	59	120
McKittrick	3	.....	.....	4	5,109	4,845
Midway-Sunset	2	1	26	31	39,830	41,798
Mountain View	.....	.....	.....	1	2,749	2,954
Mount Poso	2	1	34	18	18,885	21,890
Paloma	11	.....	.....	4	1,987	1,829
Pleasant Valley	1	.....	.....	4	3,901	2,334
Pyramid Hills	.....	.....	.....	8	384	158
Race Track	3	.....	.....	2	514	.....
Raisin City	2	.....	.....	4	3,318	2,432
Rio Bravo	.....	.....	.....	.....	17,165	15,998
Riverdale	1	.....	.....	6	4,331	3,739
Rosedale Ranch	1	.....	.....	.....	103	.....
Round Mountain	4	3	498	10	9,961	10,974
Shafter	.....	.....	.....	.....	.....	7
Sheep Springs	.....	.....	.....	2	524	.....
Strand—East	.....	.....	.....	1	877	519
Strand—West	.....	.....	.....	.....	1,563	1,662
Tejon	2	.....	.....	7	464	166
Ten Section	.....	1	51	.....	12,541	11,825
Union Avenue	.....	.....	.....	.....	112	120
Wasco	.....	.....	.....	.....	1,433	2,349
Wheeler Ridge	.....	.....	.....	.....	233	254
Miscellaneous	4	.....	.....	.....	14	.....
TOTAL SAN JOAQUIN VALLEY	103	69	12,185	622	479,645	392,393
COASTAL AREA						
Aliso Canyon	3	.....	.....	4	3,136	2,801
Bradley Canyon	.....	.....	.....	.....	98	.....
Capitan	2	.....	.....	1	2,375	3,000
Del Valle	2	.....	.....	.....	2,020	1,699
Elwood	1	.....	.....	3	6,018	5,685
Gato Ridge	.....	1	174	6	4,813	5,281
Hasley Canyon	.....	.....	.....	.....	.....	.....
Newhall-Potrero	2	1	140	4	5,514	5,256
Oak Canyon	1	1	32	4	2,301	1,061
Oxnard	1	.....	.....	1	1,278	408

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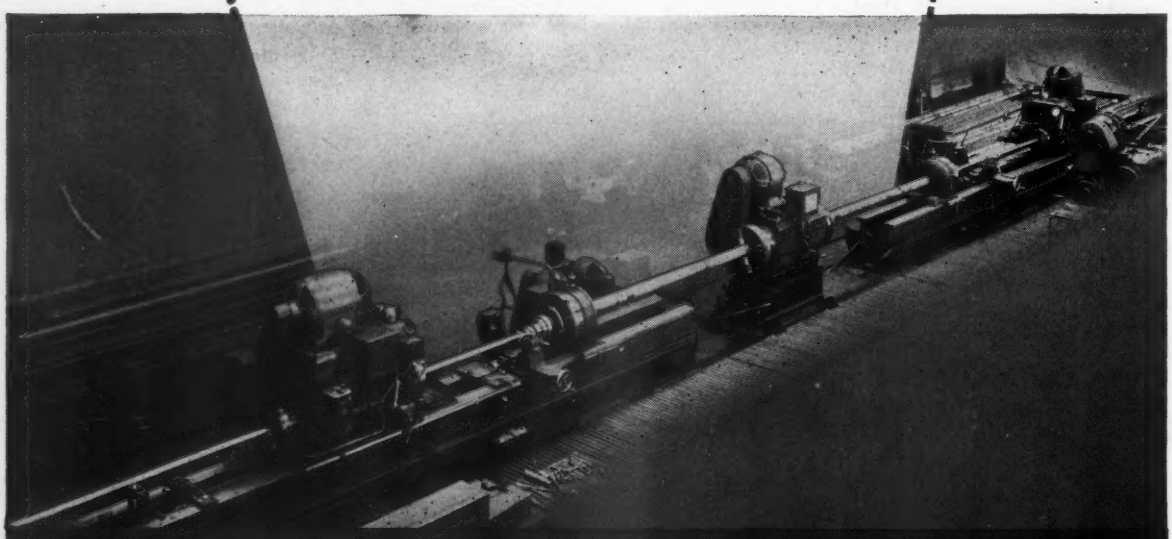

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MONTHLY SUMMARY—Continued	JUNE, 1945 DEVELOPMENT				PRODUCTION	
	Active Drilling Wells	Oil Wells Completed	Initial Production B/D	Oil Wells Completed First 6 Months	Daily Average June 1945	Daily Average June 1944
Padre Canyon	.....	.....	.....	2	2,059	1,097
Ramona	2	.....	.....	1	227	.....
Rincon	3	2	315	8	4,637	4,330
San Martinez	1	1	1,920	4	3,227	2,269
San Miguelito	2	1	256	3	5,393	5,650
Santa Barbara	.....	.....	.....	.....	123	113
Santa Maria	3	1	58	2	14,834	12,880
Santa Maria Valley	17	4	485	41	38,216	36,037
Summerland	.....	.....	.....	.....	.....	7
Ventura Avenue	12	2	267	26	48,990	48,389
Ventura-Newhall	16	4	381	26	5,735	6,348
Watsonville	.....	.....	.....	.....	25	25
TOTAL COASTAL AREA	68	18	4,028	137	151,019	142,336
LOS ANGELES BASIN						
Brea-Olinda	1	.....	.....	.....	11,769	11,757
Buena Park	.....	.....	.....	.....	109	86
Coyote—East	2	1	110	4	4,997	5,337
Coyote—West	2	4	1,059	12	14,482	12,055
Dominguez	3	1	722	4	18,693	21,815
El Segundo	.....	.....	.....	.....	808	888
Huntington Beach	7	2	183	27	49,493	47,923
Inglewood	.....	.....	.....	.....	15,653	16,946
Lawndale	.....	.....	.....	.....	24	34
Long Beach	3	.....	.....	.....	27,407	30,141
Los Angeles-Salt Lake	.....	.....	.....	.....	537	499
Montebello	1	1	38	4	9,833	10,789
Newport-Costa Mesa	3	3	238	7	330	4
Playa Del Rey	.....	.....	.....	.....	2,533	2,591
Potrero	.....	.....	.....	1	1,295	1,211
Richfield	2	.....	.....	6	7,839	6,997
Rosecrans	1	.....	.....	5	5,851	6,084
Sansinena	1	.....	.....	.....	102	.....
Santa Fe Springs	1	.....	.....	.....	17,600	18,719
Seal Beach	5	1	375	8	9,834	7,415
Torrance	3	3	142	31	8,978	8,998
Turnbull Canyon	1	.....	.....	.....	172	243
Whittier	1	.....	.....	3	1,004	1,013
Wilmington	12	9	1,575	63	101,005	100,804
Yorba Linda	.....	.....	.....	.....	585	870
TOTAL LOS ANGELES BASIN	49	25	4,442	175	310,933	313,219
Outpost Wells	27	.....	.....	.....	.....	.....
Wildcats	32	.....	.....	.....	.....	.....
Gas Wells	2	.....	.....	27	.....	.....
TOTAL CALIFORNIA	281	112	20,655	1,143*	941,597	847,948

*—Includes gas wells completed and 182 drilling wells abandoned.

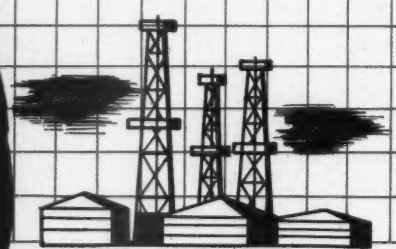
TABLE II—SUPPLY AND DEMAND FOR PETROLEUM PRODUCTS
PACIFIC COAST TERRITORY
DATA FOR JUNE OF EACH YEAR

	June 1940	June 1941	June 1942	June 1943	June 1944	June 1945
RAW MATERIAL—B/D						
1. Crude Oil Produced—California	617,467	638,939	650,837	775,974	847,377	941,597
2. Crude Oil from outside 5 Western States	267	1,961	2,696	4,983	4,223	33,703
3. Natural Gasoline Produced	38,000	39,000	34,000	39,000	42,000	45,000
SUPPLY OF FINISHED PRODUCTS						
ALL SOURCES—B/D						
4. Natural Gas., L.P.G. & Condensate	15,634	8,067	10,367	11,400	13,033	14,500
5. Gasoline and Naphtha Distillates	203,067	251,067	226,567	255,300	324,433	373,633
6. Kerosene and Kerosene Distillates	10,433	10,266	7,700	10,433	11,100	7,200
7. Lubricating Oils, etc.	11,933	13,067	13,800	13,900	14,267	15,100
8. Gas Oil and Diesel Oil	72,267	84,566	70,700	81,400	97,600	91,267
9. Fuel Oil Residuum	249,800	279,133	335,366	391,100	432,233	507,867
10. Asphalt and Road Oils	25,633	30,267	41,933	30,400	30,033	31,000
11. Coke and Other Finished Products	2,433	3,300	1,900	1,133	1,866	9,832
12. Miscellaneous and Losses	**69,767**	**8,100**	**(9,298)**	**40,267**	**12,067**	**15,601**
13. TOTAL SUPPLY	660,967	687,833	699,035	835,333	936,632	1,066,000
14. TOTAL DEMAND	707,667	741,000	844,000	972,965	968,734	1,085,169
15. DIFFERENCE	(46,700)	(53,167)	(144,965)	(137,632)	(32,102)	(19,169)
16. Stocks on hand End of each month (Total Bbls.)	158,351,000	144,744,000	132,907,000	126,111,000	88,107,000	74,172,000

When Tret-o-lite goes in...

Treating Costs

Go Down



TODAY the economy of Tret-O-Lite demulsification compounds is recognized by oil producers everywhere. Years of application to crude oil emulsion problems under all producing conditions have resulted in the development of effective fast-performing formulas that deliver maximum savings in money, time and production. Call your Tretolite field engineer... his laboratory background and years of practical experience should prove profitable to you.

Tret-O-Lite

REG. U. S. PAT. OFF.

DEHYDRATING **DESALTING**

TRETOLITE COMPANY *Manufacturing Chemists*

Webster Groves, St. Louis County, Mo., Los Angeles, Calif.

Complete Service for Every Field

THIS LAUGH OFF!!

After getting married to his late secretary, he remarked:

"Well, my dear, I suppose I must get someone to take your place in the office."

"I've been thinking of that," responded the bride, "my cousin is just leaving school."

"What's her name?"

"John Henry Briggs," said the bride, sweetly.

Might as well call the Republicans the Old Maid Party—always disappointed but never giving up.

First Recruit: "What a purty bird that is!"

Second Recruit: "Yeth, it's a gull."

First Recruit: "I don't care if it's a gull or boy; it's purty."

Daughter: "Has my mail come yet?"

Mother: "Daughter! You must stop that terrible slang."

"I'll put the motion before the house," said the chorus girl as she danced onto the stage.

Why stoutish lady gardeners
Seem partial to short dresses,
Is something no one seems to know.
Though everyone confesses
It isn't fair to passers-by,
Since who could be unheeding
Of plumpish dames in shortish gowns
Bent over, busy weeding?

Someone once asked James T. Corbett what was the most important thing a man must do to become a champion. He replied: "Fight one more round."

Judge: "So you deceived your husband?"

She: "No, judge. He deceived me. He said he was going out of town and then he didn't go.

Sailor (at counter): "Say, do you take anything off for cash?"

Salesgirl: "This is a department store, not a burlesque show."

"Pa, my teacher told me that I was illiterate," announced the teenage Arkansawer.

"The heck he did," snorted the irate parent." Well, you just take your birth certificate to school with you tomorrow and show him you ain't."

I wish I was a wittle egg
Away up in a twee.
I wish I was a wittle egg
As wotten as could be.
And when some guy that I dislike
Would pass beneath my twee,
I'd take my little wotten self
And dwop myself on he.

"It's pretty cold, son. You'd better wear gloves when you go over to see your girl."

"Not me, Mother. I feel better without them."

"I fainted. They brought me to. So I fainted again."

"How come?"

"They brought me two more."

We never used to be able to find grandma's glasses but now she just leaves them where she empties them.

A certain small-gage promoter, whose financial difficulties have been a topic of Wall Street chit-chat for many years, was asked by a friend, "Joe, do you realize that a man's success depends a great deal on the formation of early habits?"

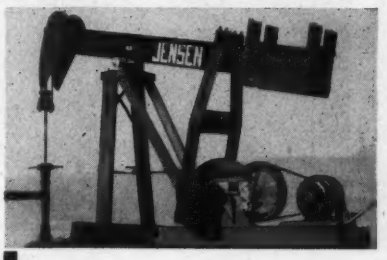
"Do I?" rejoined poor Joe. "When I was a baby my mother hired a woman to wheel me about, and I have been pushed for money ever since."

Guest: Well, good night—hope I haven't kept you up too late.

Host: Not at all. We would have been getting up soon anyway.

A golfer, trying to get out of a trap said: "The traps on this course are very annoying, aren't they?"

The second golfer, trying to putt: "Yes they are, and I sure wish you would keep yours closed."



California Goes JENSEN

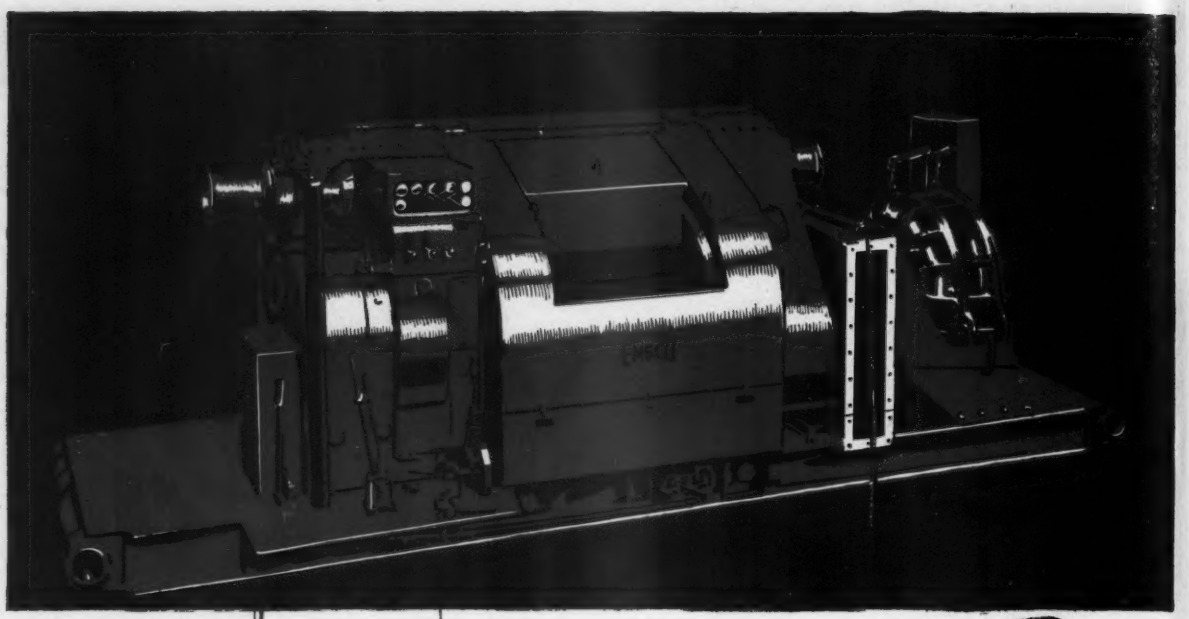
California wells and JENSEN Pumping Units go together as naturally as bread and butter or shoes and socks. Definitely, a JENSEN Unit is likely to make any California well more profitable and satisfactory.

For information guaranteed to interest any producer, get in touch with:

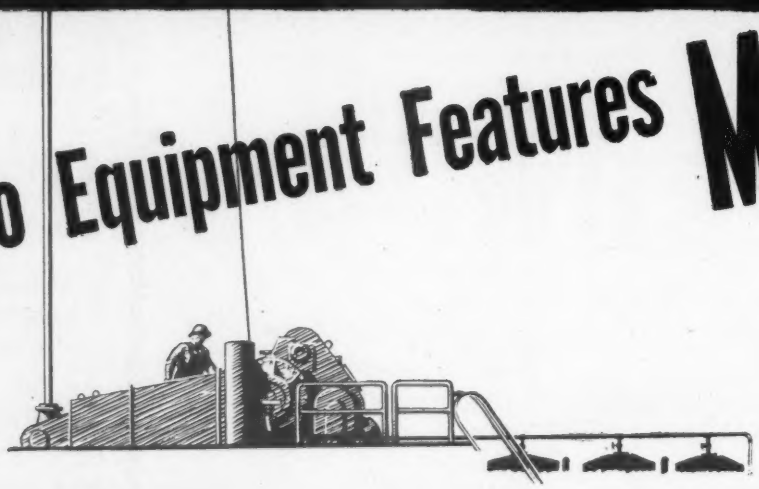
California Representative:
A. V. TURNER
445 W. 6th, Downey, Calif.
Phone: Topaz 2-2410

Stocked by
THE OIL TOOL CORPORATION
3075 Cherry Avenue, Long Beach, Cal.
Phone 481-81

JENSEN BROTHERS MFG. CO.
14th and Pacific Streets
COFFEYVILLE, KANSAS, U. S. A.
EXPORT OFFICE, 50 Church St.
New York City



Emsco Equipment Features M.D.*



HERE IS A DRILLER'S RIG!

Smooth dependable performance, fewer shutdowns, longer life . . . these are the characteristics built into every Emsco Draw Works. They have what we call Maximum Drillability, for they are designed to operate efficiently and economically under all drilling conditions. Consider the Emsco J-1250, for instance. It's a 1250 horsepower unit designed for the deepest drilling, yet has little increase in weight, and no sacrifice of safety factors over units of shallower depth ratings. It incorporates disc-type, air operated friction clutches, has 6 hoisting speeds, 3 rotary speeds, 2 reverse speeds to the drumshaft, and an outstanding brake design. This draw works meets road-width requirements without dismantling.

The complete rig consists of draw works, selective speed transmission, compounding transmission, engines and power slush pumps. The unit breaks down into convenient road-width packages. Careful attention to engineering details and the high quality of materials and workmanship provide a smooth, easily-handled, efficient drilling rig—the latest addition to the Emsco line.

DALLAS PLANT
HOUSTON PLANT

EMSCO

MAXIMUM DRILLABILITY

EMSCO DERRICK & EQUIPMENT COMPANY

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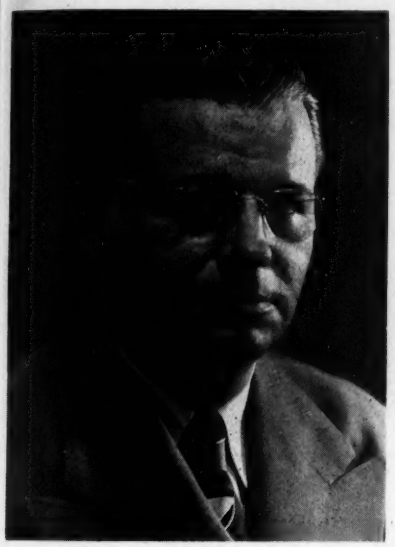
Distributors:

Continental United States, except California, Oregon and Washington . . . The Continental Supply Company, Dallas, Texas • California, Oregon and Washington . . . Emsco Derrick & Equipment Company, Los Angeles, California • Export and Eastern Canada . . . The Continental Supply Co., Inc., New York, N.Y. • Western Canada . . . The Turner Valley Supply Co., Ltd., Calgary, Alberta, Canada

Nagel Joins Fluor Corp.

Mr. R. E. (Bob) Nagel, formerly with the Universal Oil Products Company of Chicago, has accepted a position with The Fluor Corporation, Ltd., of Los Angeles and will be located at Fluor's New York offices as District Sales Manager. Mr. Nagel has been with the Universal



R. E. Nagel

Oil Products Company for the past twenty-four years during which time he served in various capacities; first as a draftsman, then followed assignments as supervising construction engineer, Superintendent of Construction and operator on experimental and commercial thermal cracking units and in their research and development department. For the past twelve years he has been in constant contact with various oil companies in the commercial development of refining processes and their problems. Mr. Nagel will continue in the latter service for The Fluor Corporation, Ltd., at their New York offices.

New Signal Officers

Signal Oil and Gas Company has just announced the election of S. J. Fox as Comptroller and Roy O. Wegfors as Treasurer of the company.

Mr. Fox has been with the Company since September, 1932. Formerly assistant manager of the firm of Ernst and Ernst where he directed the accounting staff of their St. Louis office, Mr. Fox came to California in 1926 and was on the staff of the Los Angeles office of Haskins and Sells up until he became associated with Signal.

Mr. Wegfors, formerly of Minneapolis, Minnesota, came to California in 1928, where he joined the staff of Haskins and Sells and served as senior accountant for that firm up to the time he became associated with Signal in August, 1936, as tax accountant.

Both men have over a period of years held responsible positions with the Company.

Montebello Test Wet

Hathaway Co. Dore No. 1 deepened to the 9th zone at 8903 ft. and plugged back to 6570 ft. for recompletion after the lower section of the hole tested wet.

Herley-Kelley Inc. Burke Com. No. 1 deepened to 8800 ft. for a similar objective and at last report was making an open hole swab test. Some oil was reported being recovered.

Union Oil Co. is deepening Paul J. Howard No. 4 in search of 9th zone or deeper production.

C.N.G.A. September Meeting

At the regular monthly meeting to be held Thursday, September 6, C. N. G. A. guest speakers will present two excellent papers on the determination of soil properties.

Trent R. Dames of Dames & Moore, civil engineers, will tell members how to avoid foundation cracks, and the settling of tanks or other equipment through means of a planned investigation of soil properties as they affect plant foundations.

As a follow-up to this important subject, T. H. Gilbert, electrolysis engineer of Southern California Gas Company, will discuss the causes of soil corrosion and describe two practical test methods to determine the most effective means of protecting buried lines from corrosion.

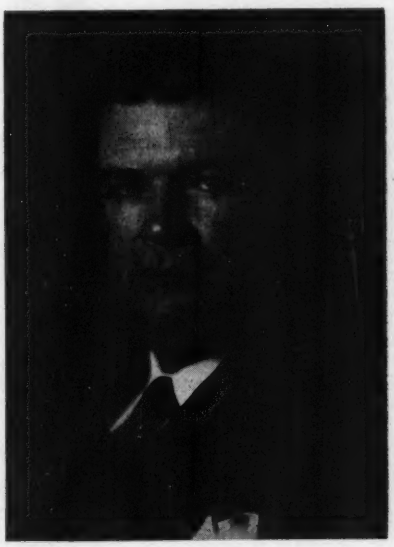
Chiksan Forms Own Export Company

Increased activity in export markets is anticipated by the Chiksan Company, Brea, California, with the announcement of the establishment of an affiliate company to handle export sales. The new company, Chiksan Export Company, will headquarter in Brea, with branch offices in New York and Houston. The cable address is "Chiksan."

W. Edgar Spear, president of the Chiksan Company, heads the new export company in the same position, with Lee J. Laird, Chiksan vice president and sales manager, also in charge of export sales. The New York officet at 50 Church St., will be managed by H. A. Maland and the Houston office, now in process of organization, with temporary mailing address P. O. Box 276, Houston 1, Texas, will be under the management of G. R. Winder, who transfers to Houston from the Chiksan home office in Brea, California.

Elmer Smith on Foreign Trip

Elmer R. Smith, export representative, left Los Angeles August 9th for an extended trip to the centers of all oil activities in Mexico, Peru,



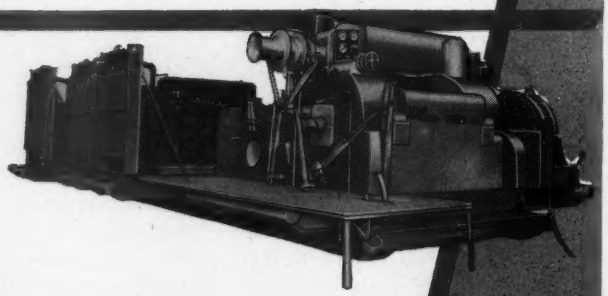
Elmer R. Smith

Ecuador, Colombia, Venezuela and Trinidad. Mr. Smith represents H. C. Smith Oil Tool Company, MacClatchie Manufacturing Company, Pacific Wire Rope Company, Matin Wells and Eld Metal Company. He expects to be gone for nearly three months.

GET A GOOD LOOK AT THIS MODERN CLUTCH!

IT'S ONE OF THE REASONS WHY WILSON RIGS *Set the pace* IN DRILLING!

The engine clutch, as you already know, is one part of a power rig which is of important concern to every driller. Here's one thought we want to leave with you — that through highly skilled engineering the WILSON ENGINE CLUTCH has been made the very finest available. Seventy-five per cent of the difficulties encountered with engine clutches are eliminated by use of the WILSON ENGINE CLUTCH. Let us prove to *you* the superiority of this clutch — won't you?



WILSON HOLDS RECORD FOR DEEPEST WELL EVER DRILLED BY A POWER RIG . . . . . .

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PACIFIC COAST REPRESENTATIVES FOR

WILSON RIGS and WINCHES

Field Development

PREPARED BY CALIFORNIA OIL WORLD NEWS SERVICE

Los Angeles Basin

Dominguez Well Flows

Shell Oil Co., Inc. Reyes No. 138 completed from perforations at intervals from 4820 ft. to bottom at 5360 ft. flowing under control of a 6/64 in. bean, 478 b/d clean 26.0 gravity oil.

Seal Beach Well Flowing

Hellman Estate No. 7, completed at 8160 ft. flowing an initial 1918 b/d rate through a 1 in. bean, is currently flowing 210 b/d clean 30.0 gravity oil through an 8/64 in. bean under 600/2010 lbs. pressure. The company's No. 17 is drilling near 3000 ft.

West Newport Field Proves Good

The newly discovered West Newport Beachfield, although apparently limited in area, is proving productive at shallow depth. Latest completed here was Macoil Co. Banning No. 12 which completed at 1900 ft. for 146 b/d, 18 plus gravity oil. No production problems are present here and the presently proved acreage of all operators will continue to be developed.

Lincoln Park Well Testing

Dumm Bros. Pet. Corp. Olympic No. 15, near Lincoln Park in the City of Los Angeles, is preparing for a production trial after a 3rd cement job on a combination string landed on bottom at 1259 ft. Some 60 ft. of fairly well saturated sands offer a good chance at a shallow discovery. Owing to the long delay in testing, however, it is probable that much drilling water will be exhausted before the test can be considered adequate.

Del Valle Try Sets Casing

Bankline Oil Co. Orduno No. 105, sec. 18-4n-17w, is testing shut off on casing cemented at the top of the oil zone. Bottomed at 3100 ft. the well flowed on test below 2980 ft. at a 200 b/d rate clean 26.0 gravity oil.

Superior Oil Co. Handy No. 1, in the same section is drilling ahead below 5200 ft. while Herley-Kelley are preparing to build rig for Handy No. 2.

The Texas Co., which touched off the current flurry here with a substantial completion is testing at intervals on Kern No. 32-18, is drilling No. 41-18 below 7465 ft. and abandoned No. 42-13 at 7108 ft.

In the field proper R. E. Havenstrite, Operator, Ohio Oil Co. and Standard Oil Co. continue to develop their acreage.

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Los Angeles County					
Athens	Gen. Expl. Co. of Calif., Johnson	1	11, 3-14	9313	Prep to pump
Aliso Canyon	Seaboard Oil Co., Evans	1A	23, 3-16	3537	Drilling
	Standard Oil Co., Wigdal	1	19, 3-16	1080	Drilling
	Wilshire Oil Co., Marquis	1	35, 3-16		Cellar
Bandini	Richfield Oil Corp., U. P. Unit	1	9, 2-12	8496	Fishing D.P.
	Willis. C. G., Pansini	1	23, 2-12	6002	Drilling
Castaic	Charter Oil Co., Vinnell	1	18, 5-16		Rig
Brea	El Rancho Expl. Co., Rancho	1	30, 2-9	405	Idle
Del Valle	Bankline Oil Co., Orduno	105	18, 4-17	3100	Reaming
	Superior Oil Co., Handy	1	18, 4-17	5011	Drilling
	The Texas Co., Kern-West	42-13	13, 4-18	7108	Abandoned
	The Texas Co., Kern	32-18	18, 4-17	3251	Testing
	The Texas Co., Kern	41-18	18, 4-17	7465	Drilling
Gardena	Ohio Oil Co., Gardena Comm.	1	25, 3-14	10509	Drilling
La Habra	Union Oil Co., Sansinena	17	30, 2-10	3383	Coring
Las Llajas	Standard Oil Co., Brady Est.	2-1A	13, 3n-7w	7749	Drilling
L. A. City	Dumm Bros. Pet. Corp., Olympic	15	24, 1-13	1259	Testing
	Seaboard Oil Co., L. A. Brick	1	21, 1-13	5949	Drilling
Newhall	C.C.M.O. Co., Sanborn	1	6, 3-16	7704	Drilling
	Signal Oil & Gas Co., Needham	1	14, 3-16	4998	Pumping
Oak Canyon	Western Gulf Oil Co., Stevens	B-1	5, 4-17	8065	Drilling
Placerita Creek	Petroleum Expl. Co., Kraft	1	31, 4-15		Rigging up
Seal Beach	Shell Oil Co., Bryant Ranch	1	34, 4-12		Rigging up
Turnbull Canyon	Continental Oil Co., Comm.	6	14, 2-11	3462	Drilling
	L. A. Brewing Co., Jones-Comm.	1	24, 2-11		Prep. to spud
W. Coyote	Barnsdall Oil Co., S. H. R.	3	21, 3-10	5704	Drilling
	Standard Oil Co., Lewis	1	11, 3-11	10170	Drilling
Whittier	Atlas Prod. Inc., Grey	1	17, 2-11	4975	Idle
Imperial County					
El Centro	Amerada Pet. Corp., Timken	1	28, 16-14	7323	Fishing
Holtville	The Texas Co., Grupe-Engebretsen	1	8, 16-16	12313	Abandoned
Orange County					
Buena Park	Gen. Pet. Corp., Librown	1	21, 3-11	11215	Drilling
Costa Mesa	Atlas Prod., Inc., Irvine	1	23, 6-10	2560	Idle
	Lovelady & Christman, Wilson	1	21, 6-10	700	Idle
	D. D. Dunlap Aldrich	1	18, 6-10	2900	Drilling
Kraemer	Mid. Cal. Pet. Co., Mid. Pet.	K-1	24, 3-9	2600	Idle
Sunset Beach	Howard, Fred H., HISC	1	19, 5-10		Location
San Bernardino County					
Chino Hills	Chino Hills Oil Co., Kraemer	3	33, 3-28	1000	Idle

Newhall-Potrero Well Cores Ahead

C. C. M. O. Co. Sanborn No. 1, sec. 6-3n-16w, is coring ahead in hard brown shale below 7700 ft. The well plans to explore to maximum depth and will core extensively for geologic information.

On sec. 26-4n-17w, Barnsdall Oil Co. is rigging up to deepen the old 8520 ft. Newhall-Potrero Oil Co. Ferguson No. 1. The company has vast holdings in the nearby field and seeks additional information concerning flank and nearby conditions.

Athens Area Try Testing

J. E. Pettijohn entered the old General Expl. Co. of Calif. Johnson No. 1 on sec. 11-3s-12w, gun perforated 8935- 9005 ft. and is rigging for a pump trial.

Buena Park "Cat" Fishing

General Pet. Corp. Librown No. 1, sec. 21-3s-11w, cored to 11,215 ft. and dropped a quarter of a mile of drill pipe. At last report the top of the fish was at 9992 ft.

THE HODAG and
The Double Blue Line
What's that animal got to do with
WIRE ROPE?
PLENTY! According to old legend, this mythical monster found only one thing he couldn't wreck — a wire rope with two blue strands. So he joined forces with it: ever since, he's been the sign and the name of the best in wire rope — HODAG "Double Blue" Lines. This oil country wire rope meets all A.P.I. Specifications, and is furnished in all sizes, grades and types. Rotary and Casing Lines are 6 x 19 Seales construction, preformed or non-preformed, IWRC or hemp center.
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East Coyote Well Pumping

Tide Water Assoc. Oil Co. Hualde No. 7 is pumping a settled 106 b/d of clean 24.5 gravity oil while making 38 MCF gas from plugged depth of 5113 ft.

Bandini Area Well Deepening

C. G. Willis is drilling ahead in Pansini No. 1, sec. 23-2s-12w, after once suspending operations. Depth was last reported near 6500 ft.

On section 9 of the township Richfield Oil Corp. U. P. Unit No. 1 is cleaning hole to run a protective string of 8⅝ in. casing to bottom at 8496 ft. Meagre showings uphole were deemed unworthy of trial before casing. The operators will rerig with a drilling outfit capable of going to 15,000 ft. for a thorough test of the area.

Hurnbull Canyon Wildcat Starting

Los Angeles Brewing Co. is preparing to spud Jones Community No. 1. The test is located 856 ft. south and 462 ft. east of the northwest corner of Sec. 24-2s-11w. Chas. J. Lick is the agent in charge while Camay Drilling Co. will make the hole.

Long Beach Wells Deep

Shell Oil Co. Inc. has two deep tests going on Signal Hill. Deepest is Alamitos No. 48A which is below 13,300 ft. while not far behind is Stakemiller-Rose No. 1 at 12,278 ft. The wells seek production below the 10,000 ft. De Soto zone, deepest yet produced here.

National Announces New Appointments

The National Supply Company announces the appointment of Forrest J. Young as Chief Engineer of the California Division, and Spencer W. Long as Assistant Chief Engineer of the California Division.

BUY WAR BONDS

San Joaquin Valley

Edison Well Now Recompleted

H.H. Magee, Operator deepened Dougherty No. 5, sec. 14-30s-29e from 2659 ft. to 2715 ft. and went to the tanks flowing 700 b/d 17.5 gravity oil through a 29/64 in. bean under 70/110 lbs. pressure. The operator is currently preparing to test the Basement on Brown No. 4 and Doughterty No.s 3, 4 and 6.

Jergins Oil Co. Jergins-Texas Fee No. 25, sec. 23-30s-29e drilled to 3068 ft. and abandoned after formation tests recovered only mud and water.

Helm Area Well Flows

General Petroleum Corp. Whitten No 75-23, sec. 23-17s-18e in Fresno county, gun perforated Miocene oil sands in the interval 6872-74 ft. and flowed on formation test at a 672 b/d rate clean 32.7 gravity oil. Operator is now gun perforating to take in a wider interval of zone.

Paloma Wells Yet Working

Superior Oil Co. Anderson No. 16-35, sec. 35-31s-26e, bottomed at 11,135 ft. in oil sand after topping the Paloma pay at 11,110 ft. and set 7 in. casing at the top of the zone for trial. The company's Houchin No. 27-27, sec. 27-31s-26e, is drilling ahead in hard shale at 11,995 ft.

Western Gulf Oil Co.'s outpost try, L. A. Club No. 67-6 on sec. 6-32s-27e, suspended operations after failing to establish commercial production. Total depth of the try was 12,792 ft. The company's southeasterly field outpost try, Symons No. 63-7 on sec. 7-32s-27e, is drilling at 8396 ft.

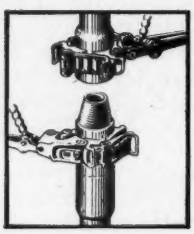
Tejon Field Well Quits

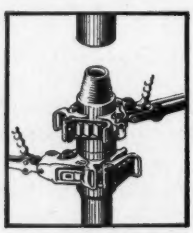
Drilling and Production Co. O. M. B. No. 47-33, sec. 33-11n-19w, is abandoning after entering gray sand at 2720 ft. and coring the formation to a total depth of 2760 ft.

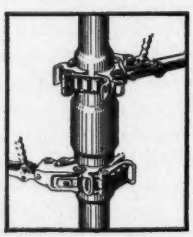
Hilo Oil Co. is preparing to complete Hilo Metzenbaum No. 34-6, sec. 34-11n-19w, at 2710 ft. in oil sand. Latest completed in the field was Richfield Oil Corp. Tejon B-

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
	Fresno County				
Burrel	Gen. Pet. Corp., Burrel	47-1	1, 17-18		Foundation
Cantua	Tide Water Assoc. Oil Co., S.P.	82-15	15, 17-15	11592	Drilling
Irvine Ranch	Union Oil Co., Irvine	65-13	13, 13-12		Rigging up
Lanare	Superior Oil Co., Sample	81-25	25, 17-18	7015	Drilling
Raisin City	Union Oil Co., S.A. & F.L.	38-29	29, 15-18		Foundation
	Kern County				
Antelope Hills	Williams Bros. Oil Co., Layman	2	12, 28-19		Prep. to spud
Arvin	Richfield Oil Corp., Di Giorgio	3-1	3, 31-29	5340	Coring
Bacon Hills	Bandini Pet. Co., Bacon	1	27, 28-20	10920	Sidetrack fish
Buena Vista	Richfield Oil Corp., B. V. A.	72-25	25, 31-25		Grade
Coles Levee	Union Oil Co., Kernco	34-12	12, 31-25	9976	Testing
Cymric	Standard Oil Co., Fitzgerald	55	24, 29-21	1190	Drilling
	Standard Oil Co., Well	34-26	26, 29-21		Foundation
	Standard Oil Co., Weston	1-7	25, 29-21	1372	Completing
	Union Oil Co., Anderson	55-26	26, 29-21	3846	Coring
Devils Den	Foreman, J. A., and Dan, Marine	38	26, 25-18	310	Idle
	Hillview Oil Co., Alferitz	3	14, 25-18	2088	Fish bailer
	McAllister, Wm. G., McCalden	1	26, 25-18	1327	Idle
	Priest & DeKalb, Blake	12	25, 25-18	225	Drilling
Edison	General Pet. Corp., Cauley Fee	42-16	16, 30-29	5920	Coring
	Richfield Oil Corp., Cauley 2	15-16	16, 30-29	3860	Redrilling
	Richfield Oil Corp., S. P.	15-1	31, 29-30		Foundation
	Rothschild Oil Co., Porter	3	17, 30-29	3960	Pumping
Fairfax	Richfield Oil Corp., Smith	88-1	1, 30-28		Location
Fruitvale	Gen. Pet. Corp., Calloway	66-17	17, 29-27	6927	Drilling
	Nat. Iron Works, Galtes	1	14, 29-27	3063	Idle
Gosford	Rothschild Oil Co., KCL-A	83-13	13, 30-26		Prep. to spud
	T.W.A.O. Co., KCL	22-23	23, 30-26		Grade
Jasmine	Utility Oil Assoc., Quinn	4A	15, 25-27	1350	Drilling
Kern Bluff	Floray Pet. Co., Well	1	24, 29-28	3715	Idle
Lost Hills	Standard Oil Co., Cahn	58	4, 27-21	11080	Fishing D.P.
McKittrick	Tide Water Assoc. Oil Co., Well	65-34	34, 30-22		Location
Mojave	Thos. M. Blake, Cinco 1		22, 31-27	1718	Idle
	J. S. & L. Oil Co., Childs-Wall	1	9, 32-38	1940	Resuming
	Park, T. L., Dove	1	25, 31-37	40	Idle
Mt. Poso	Maurer & Fisher, Jean	2	15, 26-28	1098	Abandoned
Mt. View	J. Paul Getty, Derby	23	33, 30-29	6933	Testing
	Richfield O. Corp., W. Mtn. View	53-16	16, 30-28		Foundation
	Rocket Pet. Corp., Comm.	1	29, 30-29	5176	Drilling
Midway-Sunset	Richfield O. Corp., Smith & Crawford	1	3, 31-22	6398	Drilling
North Belridge	Tide Water Assoc. Oil Co., Well	2-17	17, 27-20	6864	Drilling
North Edison	Standard Oil Co., Well	45-21	21, 29-29	4005	Coring
Paloma	Superior Oil Co., Houchin	27-27	27, 31-26	11995	Drilling
	Western Gulf Oil Co., L.A. Club	67-6	6, 32-27	12792	Suspended
Round Mt.	Bradford Bishop	No. 14-1	14, 28-28	1250	Drilling
	Independent Expl. Co., Fee	1	36, 27-28		Grade
	Trico Oil and Gas Co., Olcese	3	17, 28-29	950	Idle
Saco	Gen. Pet. Corp., Kernway	64-1	1, 29-26	4851	Idle
	Gen. Pet. Corp., Kernway	68-1	1, 29-26		Rig
	Gen. Pet. Corp., Kernway	75-1	1, 29-26	4165	Rig pump
Salt Creek	Rothschild-Bender Oil Ops., Sheep Springs	6	17, 29-21	3563	Testing
San Emidio	Richfield Oil Corp., San Emidio	A-1	8, 11-21	11470	Drilling
Santiago	Richfield Oil Corp., Leutholtz	A-2	22, 11-23		Foundation
So. Dome	Los Nietos Prod. & Ref. Co., S. D.	41	13, 25-19	6417	Drilling
Tejon	Richfield Oil Corp., Tejon	D-15-31	31, 12-18	5273	Coring
	Richfield Oil Corp., Tejon	A-25-7	7, 10-19	3552	Abandoned
	Tejon Oil Co., Tejon	1A	19, 11,19	10290	Fishing D.P.
Temblor	The Texas Co., Westpet	21-29	29, 29-21	1888	Drilling
Union Avenue	Hancock Oil Co., KCL	1	6, 30-28		Prep. to spud
	Kings County				
Pyramid Hills	Pyramid Prod. Co., Spreckles	1	16, 24-18	4214	Idle
	Madera County				
Gill Ranch	The Texas Co., Gill	655-17	17, 13-16	4496	Testing
	San Luis Obispo County				
Cholame	K & M Drilling Co., Kosanke	1	17, 25-16	710	Idle
	Taylor & Rankin, Caral	1	6, 25-16	876	Idle
Cuyama Ranch	Norris, H. L., Cuyama Ro.	2	25, 11-28	200	Idle
Midway	Richfield Oil Corp., Temblor Hills	1-1	36, 31-21	9360	Abandoned
Shandon	Tutin & Twisselmann, White	1	5, 25-15	5490	Drilling
Temblor Hills	Richfield Oil Corp., & Sun Oil Co., Gonyer Unit	1	36, 12-25	6100	Drilling
	Tulare County				
Pixley	Jergins Oil Co., Cal-Grape	18-17	17, 32-26	4634	Abandoned
Trico	Magee, H. H., Opr., Heitzig	1	36, 24-23		Rig







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54-34 in the same section which is currently pumping 22 b/d clean 18.5 gravity oil from 2720 ft.

Lost Hills Try Fishing

Standard Oil Co. Cahn No. 58-4, wildcat on sec. 4-27s-21e is yet fishing. At last report the drill pipe had been recovered and the company was attempting to retrieve cutters stuck at 8092 ft.

Jasmine Area Try Drilling

Utility Oil Associates Quinn No. 4A, sec. 15-25s-27e, is drilling at 1350 ft. in sandy shale. The test is near the old Doyle Pet. Co. Quinn well which once produced a little oil from 2880 ft.

Santiago Area To Get Drillers

The Texas Co. is preparing to drill a well on its Western Minerals Co. lease, just west of Western Gulf Oil Co.'s discovery well Woodward-U. S. L. No. 2 on sec. 21-11n-23w. At last report the discovery was flowing 345 b/d 23.4 gravity -0.3% 17/64 in. bean—300 /680 lbs. and 60 MCF gas.

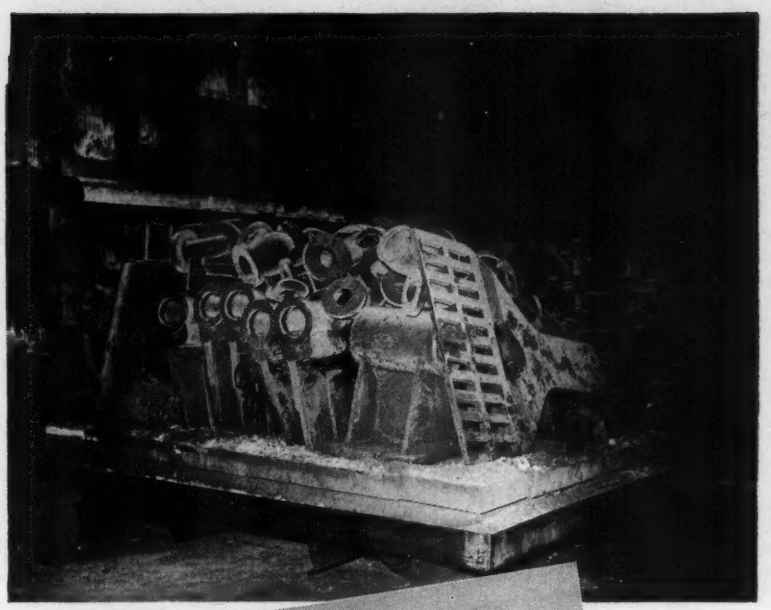
Also preparing to drill here is Richfield Oil Corp. which will put down Leutholtz No. A-2 on the northwest quarter of sec. 22-11n-23w.

Race Track Hill Well Completing

Birtish American Oil Prod. Co. Portals No. 32-3, sec. 3-30s-29e is gun perforating a full string of 5½ in. casing cemented on bottom at 4816 ft. Oil sand was logged in the interval 4748 to 4784 ft.

Coles Levee Field Extended

Union Oil Co. appears to have extended the Coles Levee field to the east on the basis of a good formation test on Kernco No. 34-12. Located on sec. 12-31s-25e, the well is completing after a formation test of oil sand from the shoe of casing at 9839 ft. to bottom at 9976 ft. flowed a 1500 b/d rate. The oil is 31 gravity and the test flow cut 26.0% water and 5.0% mud.



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Malibu Area Well Deepens

J. P. Oil Co. has taken over the old 2760 ft. Sycamore Oil & Gas Co. Boylan No. 1 on sec. 23-1s-20w. The new operators are cleaning out to deepen.

Long Canyon Well Drilling

Shell Oil Co., Inc. McBean No. 1, sec. 33-3n-20w, is drilling ahead near 8800 ft. Formation tests of showings below 8700 ft. failed when the packer repeatedly failed to hold.

Valley Outpost Swabs Water

General Petroleum Corp. LeRoy No. 1, northwesterly Santa Maria Valley outpost on sec. 16-10n-34w, was last reported swabbing water with oil colors. The well bottomed at 5223 ft. and liner run from the shoe of 8⅝ in. casing at 3480 ft. to bottom.

Squaw Flats Well Suspended

Associated Piping & Engineering Co. Bucksnort No. 1, sec. 5-5n-19w, drilled to 2606 ft. in red shale and is standing idle after bridging the hole with cement at 136 ft.

Fillmore Deep Try Yet Drills

Standard Oil Co. Elkins No. 1, deep test in the old Fillmore field area on sec. 6-3n-19w, is drilling ahead in hard shale below 12,150 ft. The well plans to explore the area to the maximum depth limits of the rig in use.

Rincon Test Getting Deep

C. C. M. O. Co. Hobson No. C-11, deep test of the Rincon field on sec. 17-3n-24w, is in the deep test category for any field. Now drilling in an 8¾ in. hole the well was last reported in brown shale at 12,540 ft., by far the deepest drilling yet done in this section of the State.

Ojai Area Wells Work

Volunteer Pet. Corp. Hilltop No. 2, sec. 7-4n-21w, is cleaning out to deepen from present depth of 3290 ft. after production trials resulted only in pumped recovery of water and heavy oil. The company has also moved in light cable tool equipment and spudded Pyramid No. 1 in the same section.

Capitan Field Well Completed

Shell Oil Co., Inc. Covarrubias No. 1-36, sec. 32-5n-30w, drilled to 6984 ft.—plugged to 3860 ft. and completed in the gun perforated interval 3805-3830 ft. flowing 356 bbls. of 38.8 gravity oil in 10 hours through a ½ in. bean. Reduced to a 16/64 in. bean the well flows 521 b/d clean oil and 650 MCF gas under 780/1530 lbs. pressure.

Ventura Avenue Work Continues

Shell Oil Co. and Tide Water Assoc. Oil Co. each continue to develop their respective large holdings in this rich field. Some 15 strings of tools are usually busy here.

Also working are Alliance Pet. Corp., which is deepening Hisey No. 4, and British American Oil Prod. Co. which is redrilling and deepening Hartman No. 14.

San Luis Obispo Co. Well Planned

Amerada Pet. Corp. will soon start its second well on the Tar Springs Ranch in the Huasna area. The new well, on sec. 23-32s-14e, seeks production from sands found present in earlier drilling of the general area.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
Santa Barbara County					
Gaviota	Standard Oil Co., Hollister	1	35, 5-33		Rig
Los Alamos	Bel-Air Oil Co., Price	2	17, 8-32	5379	Drilling
	Whittier Assoc., G. Buell	2	15, 7-32	832	Drilling
Los Olivos	Hub Oil Co., La Laguna	1	7, 7-30	5852	Idle
Ventura County					
Camarillo	Barth, D. A., Well	1	32, 2-20	520	Idle
Devils Anticline	Haddock, T. J., Lovell	1	14, 5-19		Cellar
Fillmore	Firestone Oil Co., O'Leary	1	29, 4-20	382	Drilling
	Standard Oil Co., Elkins	1	6, 3-19	12107	Coring
Hopper Canyon	Cal. Oil., Inc., Well	1	14, 4-19		Location
Hopper Creek	Union Oil Co., Moran	1	1, 4-19		Grading roads
Long Canyon	Shell Oil Co., McBean	1	33, 3-20	8752	Drilling
Malibu	J. P. Oil Co., Boylan	1	23, 1-20	2760	Cleaning out
Ojai	Delaney Pet. Corp., Victory	1	8, 4-21	3551	Idle
	Volunteer Pet. Corp., Hilltop	2	7, 4-21	3290	Prep. to deep.
	Volunteer Pet. Corp., M & L	1	7, 4-21	245	Idle
	Volunteer Pet. Corp., Pyramid	1	7, 4-21	28	Drilling
Oxnard	Lloyd Corp., Ltd., Todd	A-1	6, 1-22	4211	Idle
	Lucas, Andrew & Mabel E., Janet	1	7, 1-21	2750	Rigging pump
Piru	Ginter, C. W. & Assoc., Warring	1	19, 4-18		Prep. to spud
Red Mt.	Continental Oil Co., Casitas	2	7, 3-23		Rig
Santa Paula	Standard Oil Co., Santa Paula	1	10, 4-20	5990	Drilling
Simi (L.A. Co.)	Union Oil Co., Simi	5	22, 3-17		Grade roads
Snowball Anticline	Grubb, M. T., Opr., Snowball	1	19, 4-24	5176	Drilling
South Mt.	Los Nietos Co., C & H	1	22, 3-21	6315	Pumping
Squaw Flats	Assoc. Pipe & Eng. Co., Bucksnort	1	5, 5-19	2606	Idle
Timber Canyon	Hickey Noble J., Temple	1	22, 4-21	775	Idle
San Luis Obispo County					
Huasna	Amerada Pet. Corp., Tar Springs Ranch	2	23, 32-14		Cellar

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Alameda	Bradford & Guardino, B & G	1	7, 3s-3e		No report
Contra Costa	Ardly Pet. Co., Almond	1	3, 2n-2w	100	Idle
Merced	T.W.O.A. Co., Soares [redacted] 31-36		36, 8s-8e	4756	Drilling
San Benito	Panoche Pet. Co., Panoche	2	24, 16s-10e	160	Idle
Solano	Amerada Pet. Corp., Wineman, et al	1	35, 6n-2e	4875	Completed
	Amerada Pet. Corp., E. Wineman	1	27, 6n-2e		Location
	Shell Oil Co., Hamburger-Treadwell	1	36, 6n-2e	5903	Drilling
	Standard Oil Co., Cal-Pack	3	6, 4n-3e		Prep. to spud
	Standard Oil Co., Teal Comm.	1	27, 4n-2w	6025	Testing
Sutter	Buttes Oilfields, Inc., Buttes-Ward	2	3, 15n-1e		Rigging up

When you have a Fishing Job you need the BEST FISHING TOOLS

Fig. 1

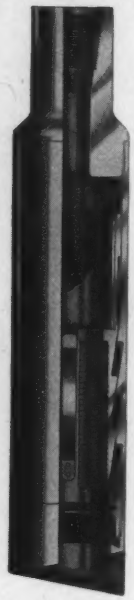


Fig. 2

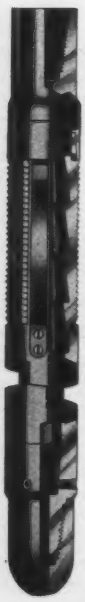
THE Shaffer-Hamon Rotary Releasing Socket (Fig. 1) is widely used for recovering drill pipe, casing, liners, tubing, or any other type of fish for which a socket may be used. It recovers miscellaneous loose fish as well as heavy stuck ones—and it is very positive both for holding and for releasing.

Modern in every respect, these sockets may be adapted to run in larger casing by the use of interchangeable oversize shoes; they may be equipped with a wall hook to straighten up a fish and guide it into the socket; a packing-off attachment is available for insuring circulation through the fish; the slips have a large amount of expansion and contraction, so that worn fish are caught by slips bored for a slightly larger size.

The Shaffer Line of Sockets is complete, and includes: the DOUBLE BOWL type equipped with an upper set of slips to catch the drill pipe, and lower slips to catch the tool joint; the LONG PULL-DOWN type (Fig. 2) made with a steep taper and long pull-down or slip contraction, which permits safely fishing for wear subs, tool joints or upsets of somewhat smaller size than the maximum for the particular socket being used—particularly where the outside diameter of the fish is unknown.

All Shaffer Fishing Tools are described in the Composite Catalog, and in the Shaffer General Catalog sent upon request.

IF A SPEAR IS NEEDED

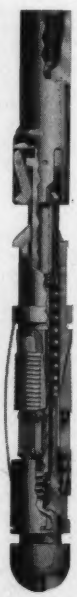


your best bet is the Shaffer-Hamon Rotary Releasing Spear which is regarded as the most efficient spear offered for positive holding and positive releasing when removing casing or pipe; for setting liners; for holding jobs; for left handing jobs; and for use with any type of rotary jar.

FOR DIFFICULT LEFT-HANDING JOBS

and for backing-off strings of drill pipe "stuck" in tight holes with a tool joint box or coupling up, the Shaffer Expanding Pin Tap is the ideal tool to use. When a string is in a close hole and it is impossible to go over the box, this Pin Tap makes a connection fully as strong as any other part of the entire fishing string.

FOR INSIDE CASING CUTTING



and for cutting tubing or liners to facilitate removal from a well the Shaffer Inside Casing Cutter offers many advantages. It may be run on drill pipe or tubing; it cuts without chattering; and it may be released and moved up or down the hole for repeated cuts, making it ideal for the "cut and pull" method in conjunction with Shaffer Spears (see view at right).

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Devils Anticline Well Starting

T. J. Haddock is starting Lovell No. 1 on sec. 14-5n-19w of Ventura county. The well will test a structure long mapped and considered potential property.

South Mountain Outpost Pumping

Los Nietos Co. and Lucy Smith Battson C H No. 1, sec. 22-3n-21w southwest of the field is pumping water with a little oil from plugged depth of 5150 ft.

Marysville Buttes Well Rigging Up

The Buttes Oilfields, Inc. is preparing to spud Buttes-Ward No. 2 on sec. 3-15n-1e of Sutter county. The company has several development wells scheduled for the area.

Duck Slough Well Drilling

Shell Oil Co., Inc. Hamburger-Treadwell No. 1, sec. 36-6n-2e of Solano county, is drilling ahead at 5903 ft.

Dixon Area "Gasser" In

Amerada Pet. Corp. Wineman, et. al. No. 1, sec. 35-6n-2e, cemented 5½ in. casing on bottom at 4875 ft. and completed flowing through gun perforations in the intervals 4795-4805 ft. and 4740-85 ft. A test of the lower interval flowed gas at a 4500 MCF rate but no figures are available for the upper or combined zones. The company is preparing to drill E. Wineman No. 1 on the adjacent section 27 of the township.

Rio Vista "Gasser" In

Amerada Pet Corp. Marks No. 3, sec. 24-4n-2e, completed in the gun perforated intervals 5440-80 & 5490-5520 ft. flowing 14,614 MCF gas through a 5/8 in. bean under 1830/1746 lb. pressure.

Wheeler Ridge "Cat" Quits

Richfield Oil Corp. Tejon No. A-25-7, sec. 7-10n-19w, bottomed in gray sand at 3552 ft. and went on the hook. The barren Santa Margarita zone was placed at 3470 ft. The company's Tejon No. D-15-31, sec. 31-12n-18w, is coring ahead at 5273 ft.

Cymric Try Going Deep

Union Oil Co. Anderson No. 55-26, sec. 26-29s-21e near its recent shallow discovery, is coring at 3846 ft. in brown shale with streaks of sand. The prospector is headed down for a look at the Carneros sand. Top of the Etchegoin oil sand was placed at 3453 ft., top of the Miocene brown shale at 3510 ft. and Miocene oil sand was taken from 3515 to 3632 ft.

Standard Oil Co.'s Fitzgerald No. 55, sec. 24-29s-21e is drilling at 1190 ft. while Weston No. 1-7, sec. 25-29s-21e, is completing at 1372 ft. after a formation test from 1025 ft. to bottom flowed mud and gas at an estimated 500 MCF rate.

Mt. View Try Cores Ahead

Rocket Petroleum Corp. Community No. 1, sec. 29-30s-29e is drilling and coring ahead in sand and shale at 5176 ft. Slight showings were logged in the interval 4900-5000 ft.

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If the rental charge were several times what it is, drillers would still say, "it's a bargain." (The charge is no higher than those of other inclinometers.)

The E-C Inclinometer operates automatically when coming to rest at the depth where the record is to be taken. No timing device is required and it is self-checking. Operates on measuring or wire line and multiple recording can be made with one round trip in the hole and read immediately on removal. Its operating costs are lower than any other inclinometer.

Ask for complete information.

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Raisin City Well Flowing

The Petrol Corp. Petrol No. 45-14, sec. 14-15s-17e, completed at 5218 ft. flowing a settled 230 b/d clean 26.2 gravity oil through a 14/64 in. bean with pressures of 400/500 lbs. The company plans immediately to drill another well one location to the west.

North Mt. Poso "Cat" Abandoned

J. H. Maurer & A. C. Fisher Jean No. 2, in the northwest quarter of sec. 15-26s-28e, abandoned in basement at 1098 ft. Top of the barren Vedder was placed at 850 ft. and top of the Schist at 1050 ft. The operators are moving to the southeast and will drill No. 3 one location southeast of the center of the section.

Arvin-Mt. View Try Blows Gas

Richfield Oil Corp. Di Giorgio No. 3-1, sec. 3-31s-29e, drilled to 5340 ft. and on a formation test of the interval 5291-5340 ft. blew 500 MCF rate gas and recovered 550 ft. of gassy oily mud. Top of the Schist zone was placed at 5306 ft. and the company will drill ahead for further testing of the Basement material.

Salt Creek Try Finishing

Rothschild-Bender Oil Operations, Sheep Springs No. 6 on sec. 17-29s-21e is completing after topping the Carneros oil sand at 3528 ft. and bottoming in the sand at 3563 ft. Casing has been cemented over the pay for production trial.

Antelope Hills Gets New Well

Williams Bros. Oil Co., discoverer of shallow production here, is starting the first of a new series of wells in the field area. The company's discovery well, Layman No. 1, which completed at 853 ft., on sec. 12-28s-19e is currently pumping 40 b/d net 15.6 gravity oil cutting 6.0%.

The company also plans to drill Kallach No.1 as a wildcat on sec. 11-25s-18e some four miles south of Pyramid Hills.

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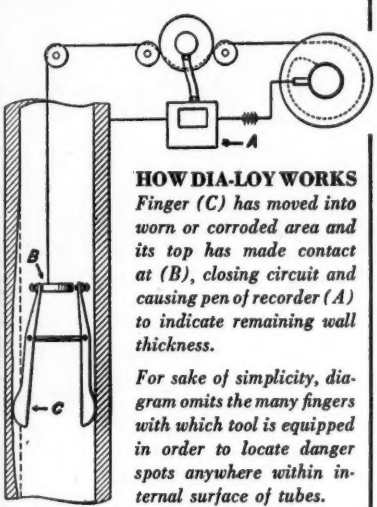


HOW DIA-LOY WORKS

Finger (C) has moved into worn or corroded area and its top has made contact at (B), closing circuit and causing pen of recorder (A) to indicate remaining wall thickness.

For sake of simplicity, diagram omits the many fingers with which tool is equipped in order to locate danger spots anywhere within internal surface of tubes.

For Complete Data on how this Service can help you Write or Phone

DIA-LOY TUBING SURVEY CO.
BOX 344, WHITTIER, CALIFORNIA
PHONES: WHITTIER 432-70 and 416-239

HOLD

YOUR

BONDS

Kern County News

(Continued from Page 15)

. . . traffic forbade anyone getting in on time . . . in fact getting in . . . period.

Many oilfolks and kinfolks are on annual civilian furlough . . . the first in many a coupon moon . . . so "personals" are bound to be high and precious.

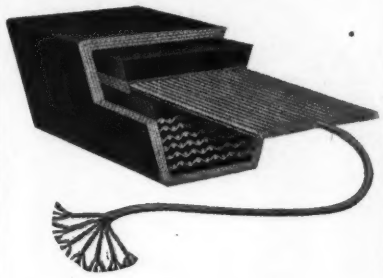
Some of the financialwigs are calling surplus stock wagers and six months depression, but prophets are taking Kern oil prosperity money at this late writing.

Saw friend Floyd L. Johnson from Honolulu Oil, geologist . . . just back from a workless trip to Huntington Lake where he forgot the oil business for a fortnight.

Lieutenant M. L. Barlow, formerly member of USC faculty is now stationed at Elk Hills Naval Base was recently a speaker before Taft Rotary on the subject "The Average Man During the War." George Lewis popular well known Kern County Manager of U. S. E. S. who has supplied Manpower together with R. E. (Bob) Evans, district commissioner to the great satisfaction of most all oilmen is drafting a story topiced, "The Average Man After the War." Recently speaking before Kern County Postwar Planning Council, he related some interesting highlights on the returning oilworker veteran and job seekers. Both these men pack a good talk-wallop for oilworker groups.

"Southern California Mining Sales Opportunities" is the name of a survey brochure which provides the names of operators, executives, addresses and production figures of 115 enterprises. Contact the Mining Division of the Los Angeles Chamber of Commerce for information regarding it.

At Mayfair Hotel a fortnight ago National Supply's representative for California was excited about Kern's Billion Dollar In Sunshine record of fifty years for July. Manager Philbin couldn't believe it and was certain that it could not have been any worse than Los Angeles. A stranger



QUICK FACTS about GOODYEAR STEEL CABLE V-BELTS

1—Power capacity exceeds any V-belt now on market.

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Will buy offset acreage or leases, landowners royalties or overriding interest in any wildcat well drilling or to be drilled in California, subject to our investigation. Western Equipment Co., 120 E. Valley Blvd., El Monte, Calif. tf

said he had noticed the weather in Bakersfield and that it was worse than he had thought. When asked what state he hailed from he simply said he had lived in Fresno most of his life. At Huntington Beach your scribe shed his perpetual coat, soaked up two shirts and witnessed heat prostrations near by . . . no records like this in Kern county. . . . So weather is a matter of what one makes it.

BAKER

Scrapes the inside of your casing to its full I.D.

●

Removes hard cement and all burrs from gun-shot holes.

Best time to do this important operation is when the bit is run to drill out cement. Leaves inside of casing smooth and clean. Prevents future damage to packers or swabs; makes all "down-the-hole" jobs safe and easy.

CASING SCRAPER

Shaffer Opens New Branch

Confidence in the future of the West Texas-New Mexico area has caused Shaffer Tool Works to build a new shop on the company's own property at 1925 West 2nd Street, Odessa, Texas. This is a branch of the main plant at Brea, California and will be operated from the Houston, Texas branch, where Carl W. Vogt is district sales manager and in charge of all Mid-Continent and Texas operations. The new Odessa branch will be in charge of James Roe. James Edgar Jackson is fishing tool operator and service man and Clarence A. Kennedy is shop mechanic. The shop is completely equipped for the service it is to perform and from this branch office will be handled all sales and service in the West Texas-New Mexico area.

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